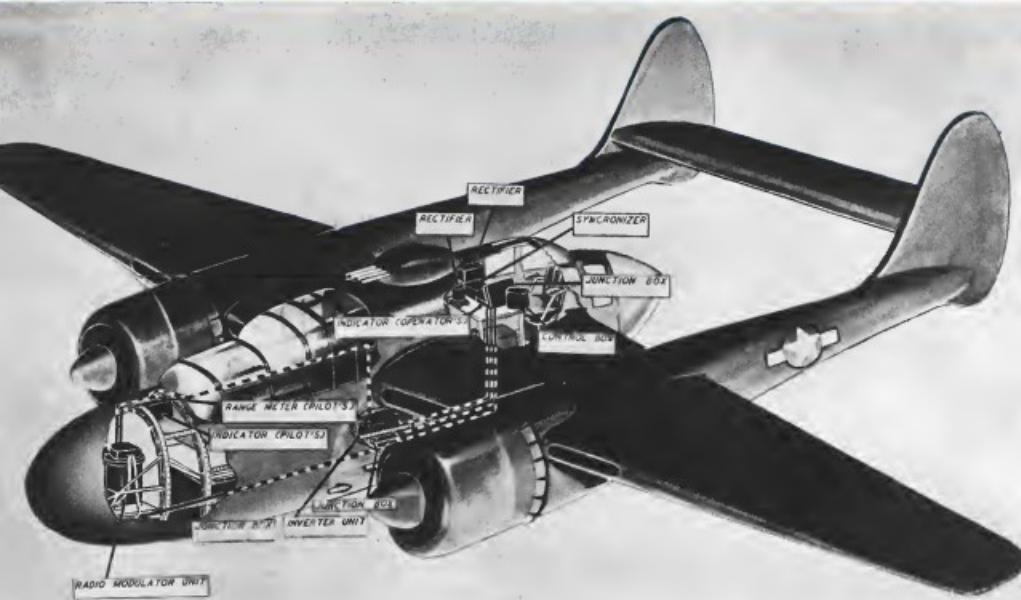


# Aviation News

MCGRAW-HILL PUBLISHING COMPANY, INC.

SEPT. 10, 1945



**Radar Maze:** End of wartime restrictions makes possible this release of a diagrammatic photo of part of the radar installations in a P-61 Black Widow. All this equipment serves only one purpose, aircraft interception. This is just one of the radar systems carried in the night fighters to enable them to fulfill missions in darkness and low visibility. Shown is the network which permits the operator to locate enemy aircraft and direct the pilot toward it.

## Aircraft Component Scrapping Looms As Necessity

Shift in RFC policy seen as result of return of industry to civilian production; agency faces rapidly shrinking market.....Page 7

## C-54E's Allocated As New Equipment Flow Begins

SPB announces 100 to 200 four-engine planes will reach carriers for commercial operation within ten weeks.....Page 41

## Carriers Begin Readjustment To Non-Priority Travel

Belief that wartime control of service patterns may follow priority air travel out of existence on Oct. 15 also expressed.....Page 46

## Small Airport Building Bans Expected To End in 60 Days

Two-month limit set for WPB restrictions on new construction; private flying will get secondary consideration until then.....Page 13

## Freight Consolidation Plan Seen Boosting Air Cargo Use

New York organization, working with American Airlines on Model 39 experiment, finds load factor on mixed shipments high.....Page 44

## See Prompt Approval For Single-Chief Surplus Agency

Present SPB head warns of disposal crisis within three months as no longer needed aircraft and other war stock reach "staggering amounts".....Page 9

# Here's the HOW...and the WHY of TRIGGER-FINGER CONTROL

(Soon available on 10, 15 and 20-lb. Fire Extinguishers)



**1.** Pull out non-jamming locking pin. Seating is in realigned holes; it can't be turned...the ends cannot get bent over.



**2.** Pick up easy-to-easy extinguisher. Balanced design and low center of gravity make carrying job simpler.



**3.** Press the trigger. That's the simple, natural way to operate extinguisher — one finger does the trick.



**4.** Get full flow at once. No halfway measures with this fast-opening valve... carbon dioxide goes right to work!



**5.** Lock open—if desired. Just move trigger forward slightly to lock it in open position—no danger of freezing.



**6.** Recharge without replacement parts. Meekly connect carbon dioxide supply and fill extinguisher up.

**S**imple, safe and foolproof, this new trigger-control valve on 10, 15 and 20-lb. Kidde extinguishers speeds the attack on fires. A novice can operate it! Write for the full details today.

Walter Kidde & Company, Inc., 950 Main Street, Bellerive 4, New Jersey



The word "Kidde" and the Kidde seal are trade-marks of Walter Kidde & Company, Inc.

# Kidde

## Washington Observer



**CRYSTAL BALL**—There are indications that there may be sharper reductions in aircraft production than appeared immediately after the surrender of the Japs. Balancing this, however, are equally strong indications that a temporary drop will be followed by a steady output of new models. In addition, President Truman has commented that it is vital to the welfare of our people that this nation maintain the development work and the nucleus of a producing aircraft industry capable of rapid expansion to keep the peace and meet any emergency. The armed forces are working on that basis.

**TRANSFER COSTS**—The War Production Board is understood to be taking the position that the transfer of war work from plant originally used for peacetime production to specialized war plants, would be to the contractor's advantage and therefore the government should not pay the costs of transfer. It is the feeling in WPB that no legal authority exists for the government to finance such transfers except in the interest of war production. The plan is, however, to make no formal announcement of definitive policy at this time.

**INDUSTRIAL MOBILIZATION**—Important powers are in agreement of planning for industrial mobilization in the event of a future emergency—which gives an indication of Washington thinking—it has been assigned to the Army and Navy Munitions Board. This means that the board will become one of the key agencies in the defense program to be adopted after the present wartime armed organization is demobilized. The assignment is part of the reconstruction program

paramount to the liquidation of wartime agencies and the shifting of their functions to regular peacetime organizations.

**SERVICES PROBLEM**—Difficult problem facing the AAF and Naval Aviation production and procurement divisions, at the moment, is the manner of ordering spare parts for the thousands of aircraft still in service. Procurement of spare parts was long a troublesome problem until a formula was devised, based on widely varied combat service that worked so well as to become a reality. The question now has arisen whether to continue spare production or revert to "contingent." The answer will be of great importance to the aircraft industry.

**WARTIME SECURITY**—The services, in some instances, are feeling that insistence on maintaining wartime security policies can be subservient to their own interests now that peace has come. For example, the Curtis facility at St. Louis has completed its war assignment. The Navy wanted to move McDonnell Aircraft into the Curtis plant which is excellently equipped. McDonnell is working on an important Navy contract, scheduled to run for many months. Security prevented the Navy from explaining to St. Louis civic authorities what the Curtis plant was wanted for or the importance of the McDonnell project. St. Louis officials wanted to use the Curtis facilities in place of their municipal airport expansion program. Reidy was told the Navy decided that no better address would be served by releasing information in St. Louis about the jet fighter plane on which McDonnell is working.



New view of German jet-propelled fighter now under study by ATSC. (AVIATION NEWS, Aug. 27).



# A New Corsair...



## ...Joins the Fleet

The Navy has a powerful new aerial weapon—the F4U-4 Vought Corsair.

Even faster than the famous F4U-1, this deadly fighter-bomber is bringing new power to the Navy's carrier-force.

**CHANCE VOUGHT AIRCRAFT**

STRATFORD, CONNECTICUT

ONE OF THE FOUR DIVISIONS OF UNITED AIRCRAFT CORPORATION

AVIATION NEWS • September 10, 1945

## Aircraft Components Scrapping Believed Looming As Necessity

Shift in RFC policy seen as result of return of industry to civilian production; agency faces rapidly shrinking market for millions of dollars worth of surplus parts and materials.

By WILLIAM KROGER

The possibility that millions of dollars worth of surplus aircraft components will have to be scrapped as unsaleable has been greatly increased by the rapidity of contract cancellations and the consequent return of the aircraft industry to civilian production.

Shortly before the end of the war, Reconstruction Finance Corp. officials held the opinion that the bulk of components and parts had to be disposed of before V-J Day. A few months later, it was erased, the market would shrink to about one percent of what it was at that time.

► **Vanishing Demand.**—Today, RFC is faced to face with the situation it feared, and the time remaining for most productive disposal is running short. After the industry gets production into high gear, the aviation market for surplus parts and components will be practically non-existent.

Meanwhile, RFC is handicapped in effecting rapid disposal, by lack of precise knowledge of what metal to be disposed of, what quantities, where the material is located and

its condition. Efforts to round out information have yielded poor results.

Indicative of the magnitude of the task is an estimate that there are approximately one million items totally unrelated to each other that fall within the classification of aircraft components and parts.

► **Guidelines Given.**—With the two basic markets for sale—aircraft war production and post-war civilian war production—now almost dead, RFC officials are giving closer attention to recurring suggestions that much of the surplus components and parts be scrapped. Col. A. R. B. Peters, chief of the components disposal section has recommended that RFC and Surplus Property Board reverse the present policy and require complete justification when materials are not scrapped, but stored.

Authoritative feeling is that owning agencies should be directed to scrap nominal quantities of identical items which cost \$100 or less. These, it is estimated, constitute about 80 percent of surplus

### "Record" Speeds

For the record:

► A Boeing B-39 was flown from Honolulu to Washington in 21 hours and 21 minutes.

► A Douglas C-44 was flown from Tokyo to Washington in 31 hours and 25 minutes. The plane, piloted by Maj. G. E. Clark, of the northeast route, starting two days after the Aleutians and at Seattle.

The C-44 was stripped of armor plating, special equipment, and armament to increase its speed, average being 320 mph. The flight was made in daylight, while the lot was Maj. Otto W. Espling and airplane commander was Lieut. Col. Charles J. Miller.

components, but at the same time represent only about 20 percent of the dollar value.

If there is no net determination along that line, RFC has been warned, the disposal organization will be completely cumbered with paper work. Recommended is that owning agencies scrap such items without declaring them surplus, and that RFC forego purge its records of them.

► **Flexible Rule.**—It is pointed out that in any event, all such items would not become surplus at once and consequently could not all be scrapped at once. Should a later use be found for components in



### IMPROVED P-61 BRAKES:

The P-61C, improved model of the Black Widow, introduces "packet frame" brakes and "high-activity

propellers, which absorb the added thrust of the B-2600C engines.

AVIATION NEWS • September 10, 1945

HEADLINE NEWS—7



RADAR EQUIPPED MARTIN MARINER:

Bisected by the "radar" strip that hangs from the nose, the radar antenna guides the plane toward its target or destination.

that category, the policy could be changed.

In disposing of components and parts that are saleable, normal channels of trade should be used, Col. Peterka believes. R.P.C. does not have sufficient experienced personnel, and cannot obtain it, to set up a merchandising organization capable of competing with established business firms.

To within the existing basis of utilizing normal channels of trade, R.P.C. has favored a fixed-price agreement for agents, which an agent can substitute for the com-pita-fied arrangement which has been used. The new contract allows the agent a 40 percent service fee to cover his shipping and other expenses.

## CAA, CAB Future Pends In Congress

Two committees of Congress opened consideration of the President's request for sweeping powers to reorganize the executive branch of the government last week, but it is too early to tell what may be in store for the Civil Aeronautics Administration and the Civil Aviation Board.

The House Committee on Expenditures in Executive Departments started hearings on legislation introduced by its chairman, Rep. Carter Glass (D-Ala.), while the Senate Judiciary Committee, headed by Sen. Pat McCarran (D-Nev.), began hearings on a companion bill.

The bills give the President only a minimum of powers necessary to reorganize Washington agencies from a war to a peacemaking organization.

Under the bill, however—

► The President could re-arrange the

CAA and CAB as an independent authority, giving Congress a sixty-day period in which to vote the re-organization.

► The President could transfer the CAA and CAB to the Interstate Commerce Commission, but Congress would still have a sixty-day period in which to veto the transfer.

► A Department of Transportation under a Cabinet Secretary and including the CAA and the CAB could not be created, because the two agencies must be merged before a new executive department and against abolition of trustee of powers of the ICC.

Meanwhile, Judiciary's chairman McCarran told AVIATION NEWS that he planned to confere with the President "in the not distant future" concerning the re-organization legislation and would at that time, recommend to the chief executive the creation of an independent CAA.

The President, however, is known to favor transfer of CAA and CAB to the ICC.

## Airmail Pickup Aids Considered By Senator

The introduction of legislation to promote the development of a nationwide system of pickup airmail feeder services is now being considered by Sen. Pat McCarran (D-Nev.).

Although the senator has not decided upon provisions to include in the contemplated legislation, he believes that a formula should be established for granting authority to feeder pickup operators, which would encourage the inauguration of such services and prevent the necessity of each new operator presenting an individual case to the government in order to obtain the

a subsidy, but which would not, at the same time, "milk" the government in supporting basically non-economic services.

## Pacific Coast Ban On Flying Lifted

Major General H. C. Pratt, commanding general of the Western Defense Command, has lifted an aerial restriction on flying military aircraft over the Pacific (P.W.P.), Sept. 8, 1946, following an emergency need issued in San Francisco.

The proclamation, which removes restrictions imposed by Public Proclamation No. 32, issued February 3, 1945, prohibits restricted flying zones and removes the eastern control of civil aircraft from the Pacific Coast to civil agencies.

A spokesman for the Western Defense Command pointed out that many regulations have been put into effect by the Civil Aeronautics Administration and their effects have shown that the new restrictions have been altered and specific management is made by the CAA. Regulations imposed by military laws and executive orders are also still in effect. These include those prohibiting the making of flights over certain areas, including military and naval installations or equipment unless prior permission has been obtained from the proper authorities.

## AIA Export Parley

Expert committee of the Aircraft Industries Association held a two-day meeting last weekend to discuss export problems which have arisen since the end of the war. Participants discussed market possibilities and sales and service for American aircraft abroad. One item on the agenda, Bryant Taylor, Douglas Aircraft, chairman of the committee,

## AVIATION CALENDAR

- Oct. 5-8—National Association of State Auto. Insurers Annual Meeting, St. Louis.
- Oct. 11-12—National Association of State Motor Vehicle Administrators Annual Meeting, St. Louis.
- Oct. 12-13—National Conference of State Motor Vehicle Administrators, St. Louis.
- Oct. 13-14—National Conference of State Motor Vehicle Administrators, St. Louis.
- Oct. 15-16—International Air Show and Trade Show, Milwaukee.
- Oct. 16-17—International Air Show and Trade Show, Milwaukee.
- Oct. 18-19—Aero-Expo, Indianapolis, Indiana.
- Oct. 20-21—Aero-Expo, Indianapolis, Indiana.
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- Feb. 29-Mar. 1—Aero-Expo, Indianapolis, Indiana.
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## Single-Chief Surplus Agency Seen Getting Prompt Approval

Federal SPB head warns of disposal crisis within three months as no longer needed aircraft and other war stocks reach "seizing amounts"; Congress appears ready to pass legislation.

Congress appears ready to pass, promptly, legislation creating a Surplus Property Administration, headed by a single administrator, and to pass prompt action on proposed changes in the 1944 Surplus Property Act to the effect that surplus assets should be disposed of as quickly as possible.

► A single administrator who could make sharp decisions on the administration of surplus disposals should be established immediately.

► Large-scale post-war dispositions have not advanced far enough and, therefore, legislation is needed to expedite the process. Syrington's suggestion that the "scrapping" of surplus property be delayed until the end of the year is supported.

► Speed favored — Meanwhile, there appears to be strong support on Capitol Hill for Syrington's suggestion that speed should be the primary consideration in government dispositions so that surplus properties can be placed as quickly as possible.

► Job Ahead — In asking for the immediate creation of a single administrator, Syrington told members of Congress that "the job has now laid down the general outline of the policies which in

judgment should be followed in disposing of surplus property. The immediate task is not primarily one of declaring policy but one of administration. The board believes that the change to a single administrator will enable the kind of decisive administrative action that will be necessary to deal promptly and efficiently with the large volume of surplus property now being declared available."

The fact is, however, that the SPB has not submitted one of the numerous policy-making plant reports to Congress, which, under the 1944 act, were due last January.

The Board's report on aircraft disposals, being drawn up under the direction of Frank Shalberg, is not expected to be completed for several weeks.

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longer version of the Mosquito, as is the parent company in England.

Contracts canceled at the Canadian plant cut Mosquito production from 1,800 to 1,113. G. A. C. Best, general manager, said 40 Mosquitos remain to be completed and test flown. The plant is expected to close down production in about eight weeks when about 3,700 aircraft have been delivered. No plans have been announced as yet regarding reacquisition of the big plant which is government-owned.

## Non-Schedule Group Nears Airline Fares

Los Angeles-San Francisco service anticipates eventual undercutting of established airline new plane sought

A new non-scheduled service between Los Angeles and San Francisco is looking toward an operation that can compete with, and undercut, the fares of established scheduled airlines.

Whether this can be accomplished probably will be tested within the coming year and the operation may be closely watched by aviation men in other sections as a possible yard-stick for similar services between other cities.

For—The Pacific Coast Airways, of which H. W. Decker, Los Angeles manufacturer, is the head, inaugurated service recently with

a one-way fare of \$36 which has just been reduced to \$30, and a trip time of three hours.

The present scheduled airline fare is \$17.40, including tax, and the flying time in the States is a block to block speed of 1000 miles.

Decker hopes to be able to set fare-based airline rates and has set a one-way fare of \$12 as a goal. The company operates several types of single-engine planes carrying three passengers and a pilot; 14 planes and 13 unlicensed certified pilots are employed.

**Note Belied**—Experience gained in having carried 300 passengers during the first month of operations has convinced Decker that his proposal of a \$12 fare is entirely reasonable, though he concedes that it cannot be done with an in-flight fleet of 12 planes or at speeds provided by his present equipment.

His low fare forecast is predicated upon the purchase of new planes carrying four passengers and pilot and matching or increasing scheduled airline cruising speed. He believes that such an operation will require a minimum fleet of 20 planes, 15 making one round-trip run, and five held in reserve as maintenance and over-haul replacements.

Now soon the scheduled airlines operating between Los Angeles and San Francisco—United Airlines, TWA, and Western Air Lines—will have to begin concerning

themselves with this wholly unexpected threat of competition will depend upon how soon Pacific Coast can obtain equipment approximating Decker's requirements.

**Flight Standard**—The company may be expected to continue operations under fares slightly higher than those of scheduled airlines, until their plane requirements are filled. As rapidly as possible its fleet will be standardized by purchase of YKS Waco airplanes. And, it may experiment with adding new routes on the West Coast if post-war air travel justifies the move.

The operation of Pacific Coast Airways should provide in coming months considerable operating information both to other operators who contemplate inaugurating such service and to the Civil Aeronautics Board.

Operations began between Grand Central Airport, Glendale, midway between the Los Angeles downtown area and Lockheed Air Terminal, and San Carlos Airport, south of San Francisco's Mills Field municipal airport. Subsequently, the company shifted its western terminal to Mills Field, also known as the San Francisco terminal for scheduled airlines. Negotiations are under way at the present time to move the northern terminal to Lockheed Air Terminal, also a center of scheduled airline operations.

**Safety Rules**—Decker's flight personnel adhere to CAA-scheduled airline safety procedures and, if a flight is canceled or interrupted by weather, follows scheduled airline procedure in paying the hotel, meals, and train or bus bills of passengers.

Plans of the company are unusual, and for passengers who are interested provide a running account of the trip's procedure and navigation.

## Rating Withdrawals Demanded By WPB

The War Production Board has warned that prime contractors and subcontractors, whose military orders have been cut back or cancelled, must promptly withdraw the ratings they have extended to their suppliers.

WPB pointed out that the contractor must immediately withdraw any extensions of the rating he has made, to orders placed by him with his suppliers for more

than \$25 worth of material. If the order is partly cancelled, the ratings must be reduced accordingly.

**Rating Blanks**—This requirement does not permit a contractor to allow the extended ratings to re-

main in effect until his supplier has delivered the materials for which the rating was extended and which are no longer needed to fill the contracts or terminated contracts.

time spent on aircraft research at Boeing, totaling 744 percent between 1940 and 1945. This increasing rate of increase is the increasing complexity of aircraft development and the mounting costs which must be allocated to engineering and designing research.

Recommendations made by the aircraft men, as methods of keeping American aviation in world leadership during peacetime were:

- That the government at all times have a minimum of two preliminary design study contracts for each type or category of aircraft placed with the industry;
- That the government let experimental design contracts for these phases of models which preliminary design studies indicate feasibility of development;

- That experimental plane models which are proven to be deficient in sufficient quantities to enable the development of production techniques and permit complete proving through operation group evaluations;

Aircraft men called for a "negotiated stand-off" on the part of the government with respect to inclusion of costs for special tooling in future aircraft orders.

In the disposal of surplus aircraft plants, West Coast aircraft manufacturers decried the school of thought favoring establishment of an inland aircraft industry for

**Research**—Reporting that

## Army-Navy Air Procurement

Close determination of Army and Navy aircraft procurement policies is expected shortly, possibly this week, with the submission to Congress of a report drafted at the direction of President Truman.

Although its exact nature is still kept confidential, it is understood to follow broad lines generally approved by various agencies to keep alive a nucleus of the industry that could quickly be expanded.

The report has been prepared under the supervision of the Secretary of War and Navy, John W. Snyder, director of recovery, and Harold Smith, director of the Budget Bureau. Budget was brought in to aid in the final framing of the recommendations, with Snyder's office coordinating the views of all agencies concerned.

With the procurement recommendations probably going to the Budget Bureau's requests to Congress to repeat wartime appropriations

process, however, it is believed Budget will ask that sufficient funds be left with War and Navy to cover expenditures authorized by the procurement policies.

It is considered likely that the amount will be large enough for considerable amounts for research and development, and defense in general terms the projects to be undertaken. It will leave undecided—or at least up to Congress—whether the research will be conducted by the AAF facilities at Wright Field, the National Advisory Committee for Aeronautics, or by the aircraft industry.

This latter is a point which is causing increasing concern to the industry. At present there must be a division of where government research work stops and the industry begins. Otherwise, there is a risk that industrial research facilities will deteriorate from lack of sufficient use, and that industry's research in general will suffer.



EIFFEL TOWER SHELTERS AAF SHOW:

Ground crewmen assemble transport planes, gliders and a Northrop Black Widow night fighter at an outdoor show, in Paris, of the AAF planes which helped knock out the Germans.

strategic purposes. The West Coasters pointed out that with planes now flying the Great Circle route, the West Coast is one of the least vulnerable locations in the country.

**Bank Protection**—Consolidated's Woodhead pointed, however, to the desirability for "dispersed" or "disintegrated" aircraft plants in different parts of the country so that the nation's plane manufacturing industry could not be wiped out in a few bombings.

If there are sufficient military orders, Woodhead reported, this can be accomplished. He said that Consolidated-Vultee has offered to keep both its large San Diego and Fort Worth plants going, if there is sufficient governmental work to warrant their operations; but that if a choice must be made, the firm will abandon the Fort Worth facilities.

Woodhead took an emphatic stand against returning surplus aircraft plants in standby condition for operations during a future emergency. They should be sold to the public, he said, so that they can be used, he declared, and make a contribution toward national preparedness and employment opportunities. Plants maintained in idle standby, Woodhead said, "would not be of any appreciable value in the case of future war."

## U. S.-Britain Air License Exchange

Pending acceptance by the Civil Aviation Authority of technical standards based on those established at November 21 Chicago, the U. S. is expected shortly to exchange with Great Britain for reciprocity in the granting of pilot's licenses.

An airman E proposed to be attached to the permanent committee on civil aviation, chief field pilot requirements which will be handed on all statutory notices when approved. This is expected to come some form of international license which would make it possible for an American to fly as well as to fly with British planes.

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Meanwhile, the U. S. has agreed to loan 17 observers under whose direction the flying of planes of their own nationality in the U. S. is. However, French pilots must have U. S. licenses to fly aircraft registered in this country.

The reciprocal discussions between the U. S. and Great Britain were anticipated by Peter M. Field, New Zealand civil service attaché in this country. He intends to do a great deal of flying both as a British Miles M-26, and in U. S. planes. Similarly, there are a number of U. S. planes in Great Britain which are to fly and will use British planes.

**Ways Plan**—Foreign planes in the U. S. must pass both written and flight examinations to obtain CAA certificates. Mansfield has proposed eliminating the flight test. British crews who would be required to meet conditions in Great Britain would amend its requirements to conform to U. S.

requires five operators. Cost to the army was reportedly about \$370,000 per set.

A recent demonstration at Lockheed Air Terminal, by the Army, required three operators. The manufacturer has disclosed that his engineers are working on a "peacetime" model of the landing control, which perhaps may be less costly, and require less personnel.

Gillfillan engineers estimate that their sets have a waiting market at 25 major continental airports. The equipment is entirely a ground installation, with no device required in the plane. The operator detects the approaching plane on the radar screen and then "tells the plane down" by voice radio, to a proper landing.

In describing the system, a company spokesman says:

"It's use on our air fields will mean great savings of life, planes, cargo and equipment in the expanded air traffic that is ahead of us. It can save large sums and much time by the cancellation of flight schedules."

Among GCA's other attributes, the manufacturer reports, it will:

• Flying planes onto any air field without the need for ground controllers and other flight bands.

• Guide planes safely around buildings, trees or other structures in all weather conditions.

• Control many planes at one time, keeping them circling if necessary at different elevations to prevent collision.

The 35-second landing rate compares with a three-second interval required for instrument landings in a recent CAA experimental demonstration at Indianapolis, in which the Gillfillan equipment was not used.

## Separation of CAA-CAB From Commerce Urged

Separation of the federal aviation agencies, both Civil Aeronautics Administration and Civil Aviation Commission, from their present connection with the Department of Commerce and reversion to the independent status is again being strongly advocated on Capitol Hill. It was reported that one group of Republicans was offering to block the federal airports bill until the separation could be effected. If the CAA and CAB are separated, it is felt that trouble at the hands of Congressmen who have refused to withdraw with economy lectures from their constituents ringing in their ears.

## PRIVATE FLYING

### Small Airport Building Bans Expected To End In 60 Days

Two-month limit set for WPB restrictions on new construction; officials assert private flying facilities will get secondary consideration until then most materials already available.

By ALEXANDER MCSUREY

All WPB construction restrictions, which have been holding back new work on small airports, are expected to be discarded within 60 days, AVIATION NEWS learned last week.

A WPB spokesman disclosed, however, that until whatever time the controls are lifted, the small airports for private fliers will not receive as much consideration as "main-line" airports in release of projects.

**Plans First**—And, generally speaking, all airport construction is regarded as secondary along with other types of non-essential structures, as any contraction of manufacturing plants which will give continuing employment to large numbers of displaced war workers.

Considerable airport construction, particularly grading and runway construction, is getting underway, however.

WPB recently gave clearance for some construction projects at 31 airports under a federal aid program authorized by Congress several years ago but delayed by wartime priorities. The projects, widely scattered throughout the country, involve expenditures of \$8,963,800 for paving, grading, clearing, drainage, lighting and similar work.

**No Frivolities**—The clearances did not give priority assistance, and CAA airways engineering division reports some difficulty in letting contracts because of that. However, the contracts are being re-advertised and better results are anticipated.

Investigation of material sources indicates that WPB controls are now largely a matter of policy, since most construction materials, with a few exceptions, are readily available.

Lumber, cast iron pipe, and brick are still regarded as critical materials, but shortages in all

## Michigan Base

Expansion of the Pontiac Michigan City Airport to provide services to private fliers is a possibility for 300-400 private planes in the planning stage.

W. C. Cushing, chief airport engineer for the Detroit engineering firm of Gilfillan & Valente, is in charge of a study for the long-term development of the expanded field. The study has been recommended by the Michigan state board of aeronautics because of the airport's proximity to Detroit and to serve as high income suburban communities makes it a logical future base for personal planes in the area.

**Border Record**—The Pontiac contract makes the 60th airport in North, South and Central America which has been engineered, in whole or in part by Gilfillan & Valente.

will mean that sheet steel, concrete, asphalt, gravel, and sand are in good supply, with the transportation problem the main difficulty. Airport lighting equipment, previously used by Army-Sixty centers is not open to civilians, as is radio equipment.

A reasonable stock of supplies used in airport construction currently is in inventory by the Army and Navy, and much of it eventually will be surplus, and available for civilian purchase.

**Field Lights**—Airport boundary lights, and other lighting equipment is among that, although the condition of the equipment varies. Some portable field lighting systems used by the Army, now are in surplus, and might be used by some fields for a temporary system, pending a more suitable permanent installation.

Until WPB does lift construction controls, some projects are still subject to WPB clearance. Local government units or individuals contemplating new airport construction or improvements on their existing fields, must fill out WPB Form 631, obtainable at local WPB offices, and file this as a request for authorization.

Sheet steel, which is being used as a lightplane hangar material, is, or soon will be, in plentiful supply, since it was largely used for Quonset hut construction for the military forces; similar is the type of hangar construction which is being projected. It is likely the brick and lumber shortage

**Flight Frequency**—While a forthcoming shift of airlines terminal



"Swift" Rises Up: Newer photo of the two-place Globe Swift prototype shows the plane revving up in preparation for takeoff. Wing-slats, hydraulic retractable landing gear, and sliding cockpit enclosure are shown clearly.

operations from Lockheed to Los Angeles municipal airport is expected to affect the Lockheed field's present income, three appears a strong possibility that the number of flights to and out of the Burbank field will not be materially reduced, since its location, at least for supplemental services, is well suited to a large portion of the Los Angeles metropolitan area.

## High School Flight Program Successes

Approximately 300 teenagers from 41 high schools were given flight experience under a recent instructional program conducted by the Texas Bureau of Aeronautics with 13 flight operators participating, with a perfect safety record, a report by the state division of aeronautical education discloses.

A questionnaire answered by 72 of the students showed the following opinions:

► Aviation has equal value with mathematics and science as a high school subject.

► Thirty-one students said they learned more geography from aviation studies than from geography courses in school.

► Sixty-three believed that the high school student should pay part of the cost of flight training (in the program the students paid half the cost).

Parents of the students were also required to answer a questionnaire, in which all replies indicated that class work in aviation and flight experience should be a part of the high school curriculum.

Operators reported a general increase in flight training as a result of the course. Of the 12 students replying to the survey, 10 were continuing to take flying les-

sions after completing the four-hour flight experience course, while 8 had entered the armed forces and the remainder were working or could not finance flight instruction.

► Returns from operators included: Hardy Flying Service, Kerrville, Tex., 8 students admitted to AF, three birds already selected; Miami Flying Service, private business has doubled since beginning flight experience program.

Hardy Flying Service, Union City, 2 girls and 3 boys have come on to solo, and three other local citizens have enrolled for private courses.

Kissip Flying Service, Clarksville, 4 students certified, and 8 others not in the classes, took 43 additional hours. Buck's Flight School Chattanooga, 15 new students and 3 private courses are attributed to the school courses.

### "AI" Cards Halted

Because of the requirement for an "airman's identification card" issued last month by the Civil Aeronautics Board, further simplifies the steps toward becoming a private pilot.

Under temporary wartime restrictions all pilots had been required to carry an identification card, and the manager of Civil Aeronautics and certifying the pilot's photograph, fingerprints, and signature, or a document identifying the pilot as a member of the Army, Navy, Marine Corps or Coast Guard.

► **Local Order.** The CAB has been repealed. Section 48-460 of the Civil Air Regulation, which had required this identification.

Revised rules require that each pilot will need to carry only their pilot certificate and medical certificate.

## Swift Powerplant Raised To 115-Hp.

Globe two-place biplane plan drop optional engine feature to save speed, climb, range.

Increased power for the Globe Swift will be provided by the use of a 115-hp engine in the two-place plane instead of the optional 85 or 100-hp powerplants previously announced.

John Kennedy, president and general manager of Globe Aircraft Corp., Ft. Worth, Tex., has announced that the Swift's new powerplant will be a six-cylinder horizontal opposed Continental engine, expected to step cruising speed of the airplane up from 180 to 145-mph using 16 percent power.

► **Structural.** The new engine will not increase weight or size of the present engine nacelle, but will increase 800 ft. takeoff run, 330-ft. per minute rate of climb, and lift the service ceiling to more than 16,300-ft.

Earlier performance figures announced with the standard 15-hp engine, had included 135-mph cruise, 790-ft. climb, and 14,300-ft. ceiling.

Globe has also announced that the production Swift will be an all-metal plane, with metal-skin wings, instead of the plastic-bonded plywood wing originally planned.

Prices of \$3,295 for the 15-hp Swift, and \$3,695 for the 165-hp version which were tentatively quoted, presumably will be revised upward to cover the additional cost of the higher-horsepower engine.

► **Prediction.** Date—First of the production Swifts is expected to appear "after Oct. 1," although quantity production and deliveries to customers may be delayed until around the end of the year.

Hydraulic mechanism for re-extending the Swift's landing gear is connected with red and green indicator lights on the instrument panel showing whether or not the wheels are down. Spring-loaded pins automatically lock wheels in down position as soon as the gear is fully extended. An auxiliary manual device for lowering wheels is provided in insurance against failure of the hydraulic mechanism.

Sets and faps and the dihedral angle of the wing and of the horizontal stabilizer give the plane exceptional directional and longitudinal stability, under all flight conditions, the company reports.

► **More Features.** Additional "innovations" are to be incorporated on the Swift within the next few months, Kennedy said.

## Southwest Private Flight Boom Previews Vast Peace Expansion

South Region CAA officials swamped by pilot license, aircraft certification requests in record breaking numbers; 1,000 new places in areas during year; written examinations increase 26 percent.

Optimistic preview of the potential peacetime expansion of private flying is found in the report of a boom which has already started among private flyers in the Sixth CAAC Region, including California, Utah, Nevada and New Mexico.

Small airport operators, flying schools and private flyers are producing a volume of work which is taxing the staff of R. E. Hook, Sixth Region CAA administrator, to capacity.

Within the last six months,

- Student certificates granted have increased 166 percent
- Identification cards granted have increased 146 percent.
- Written examinations given have increased 244 percent.
- Pilot certificates and ratings issued have increased 166 percent.
- Aircraft certificates have increased 166 percent.

The region's staff of 28 inspectors was half the pre-war number, is 30 days behind in aircraft certifications and unable to keep up with the demand for pilot tickets.

Harold Brenden, regional inspector, also reports: Designation of private pilot flight examiners is expected to relieve part of the congestion.

At Phoenix, Ariz., 341 applications for private licenses were made in a single day, most of them for ex-Army pilots, more than 500 qualified. At Oakland, Calif., CAA is receiving an average of 150 pilot applications a week.

► **Mechanics' Reaction.** Appointment of civilian aircraft and engine mechanics to make inspections for aircraft licensing, an attempt to speed this process, has not been too well received by the mechanics, since they are not permitted to charge for the service. CAA assures they will profit ultimately by thus attracting maintenance and overhaul work. Major complaint is about the two-to-five

buy additional planes, some with higher horsepower rating, and a number of Republic Stinsons are planned.

Members pay \$5 an hour for solo instruction and \$3 an hour for solo time. Thirty-two邦普ing club members have signed and are completing terms for private licenses. Ground school courses are conducted each Thursday night, when licensed instructors discuss navigation, meteorology, plane maneuvering, parachutes, civil air regulations and the theory of flight. Films are used in connection with the lectures.

The club's flying operations are conducted at Republic Field, Farmington, L. J. Officers include Phil Dorrer, president, Hans Nordman, vice-president, Hugh Burke, treasurer, George Wheat, secretary.

## War-Used Airports Readied For Release

The armed forces are making plans to return to civil control many civil airports which have been leased or otherwise acquired by them during the war as soon as demobilization can be made that no further military or naval need for their retention exists.

The Army and Navy reported that final demobilization is dependent on a number of currently "indeterminate" factors such as the future international situation, the extent of participation in any international organization, the size and deployment of the armed forces as required by these factors and the status of aeronautical development.

► **Initial Use.** Pending final decisions, fields will be made available by permit for point civil and military use so long as this does not interfere with essential military and naval operations. Fields returned by the armed forces will be available to civilian craft for emergency landings only.

One of the factors currently holding up disposition of the fields is that both Army and CAA believe they should pass to non-governmental by government grant, but the Surplus Property Disposal Law forbids the giving away of property. George Somar, formerly of the legal staff of CAA's airport services, has been loaned to SPD to assist in writing the airport disposal regulation, and it is believed the grant perpetuation is one of the matters he is tackling.



those used in Civilian Pilot Training and War Training Service programs. There are now more than 600 Cessna B-1-A's and B-1-B's in service.

Harlow W. Huntington, estimator of dealer requirements for the first six months of 1946 from former Cessna dealers, and is naming additional dealers in areas where Cessna formerly were without representation.

## CAA Approves 30 Lightplane Licenses

The Civil Aeronautics Administration has issued 30 new airworthiness certificates for lightplanes purchased from manufacturers by individuals and firms.

List of the aircraft numbers, buyers, make and model of plane, engine, and date of manufacture follows:

NO. 1000—Howard Cook, 3119 N. Orange St., Philadelphia, Pa. Date: May 1, 1945.

NO. 1001—John D. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1002—John W. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1003—Howard Cook, 3119 N. Orange St., Philadelphia, Pa. Date: June 1, 1945.

NO. 1004—John D. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1005—John W. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1006—John D. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1007—John W. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1008—John D. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1009—John W. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1010—John D. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1011—John W. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1012—John D. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1013—John W. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1014—John D. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1015—John W. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1016—John D. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1017—John W. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1018—John D. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1019—John W. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1020—John D. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1021—John W. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1022—John D. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1023—John W. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1024—John D. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1025—John W. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

## Briefing For Private Flyers and Non-Scheduled Aviation

Private plane designers may well take a tip from a robust, forty-odd business man we know who wants to fly his airplane in his business and can afford to own one. Here—he isn't buying size until he finds a plane which a non-athlete, slightly overweight man can crawl in and leave without undue exertions, and which provides room enough for his comfort. He asserts he has seen no plane in the moderate price class which comes close to the comfort to be obtained in even the lowest-prize automobile. And he thinks designers are missing an opportunity by not meeting the comfort and convenience requirements of the business executive who should be one of the biggest buyer groups for personal-type planes in the early post-war period.

**FAIRCHILD PROTOTYPE**—A "specimen" report from Hagerstown, Md., says that the low-wing Fairchild four-place personal plane prototype should be ready to fly within the next two months. How soon Fairchild will put the plane into quantity production is still undetermined. Claims are that the first Fairchild plane on the post-war market is the prototype which will be a slightly revised version of the old dependable F-24 high-wing plane. And it may not be built at Hagerstown, because of commitments there on the huge C-45 flying boxcar plane.

**SKYLARK PLANS**—A stepped-up production schedule on two new prototypes of the Skylark personal plane, is expected to enable both planes to make their first test flights by mid-July. Meanwhile the Skylark Manufacturing Company, Venice, Calif., will continue production of steel tube structures for aircraft, welfare ground equipment such as passenger ramps and cargo loading equipment and related products.

**NEW YORK AIRMARKING**—More than 100 New York communities have been asked by the state bureau of aviation to participate in a state-wide volunteer airmarking campaign. Questionnaires have been sent out to the communities which, when filled out and returned in the barren, will bring detailed instructions as to how to proceed. The markings called for by the state comply with recommendations of CAA's marking specialist, Stanislaus Noyes, to include the community's name, its latitude and longitude, a north arrow and an arrow showing direction and distance to the nearest airport. Yellow letters on a black background are recommended, with letters of size to make them legible with good visibility from 3,000-ft. altitude. Large fine red tape in the center of communities as near main highways as railroads are preferred sites for the markers.

**BRITISH ORDERS**—Orders have already been received for more than 1,000 Avon lightplanes, by Taylorcraft, Ltd., in England, which has just been granted official authorization to begin civil plane production. First models of the Avon, powered by a 150-hp. engine, with a 100-mph. cruising speed, are expected to be delivered within a month. Price of \$5,300 has been set for the plane, which eventually will be produced in three- and four-place models as well as the standard two-place version.

**FIRST AERONCA**—First post-war production Aerocar, the tandem "Champagne," was scheduled to be completed last week at the Midland, Ohio, Aerocar plant. The company has previously "handed" several "Champions" which have been circulating among dealers and disseminators for demonstrations. The "Chief," a side-by-side, two-place with more deluxe equipment, and the "Champ," two-place spin-proof plane will still under Engineering & Research Corp.'s Weick patents will follow. Prototype of the spinproof plane may be flying within the next few weeks.

—Alexander McMurtry

Duluth, Ind. Aeromac, Continental  
NO. 1025—John W. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1026—John D. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1027—John W. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1028—John D. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

St. Louis, Mo. Aeromac, Continental  
NO. 1029—John W. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1030—John D. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1031—John W. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.

NO. 1032—John D. Goss, 1100 E. 10th St., Indianapolis, Ind. Date: June 1, 1945.



Scared student sits down... too, too sudden! Little Betty bounces like a B-24, goes into a ground loop, stops with a starboard lift and a slight lurch. Next casualty—one lurch...

So the CAA man looks her over, washes out Betty for work without a few rechristenings... right rear wheel, brake parts, wingtip light, exhaust pipe, intake screen, fabric, etc., etc., eleven eternias in all. Sad eternias made all over the map from L. A. Col. to Springfield, Mass! Student's appointment suddenly shot! Revenue hours lost waiting for replacement parts!... Make the best of a bad break by making a full list of replacements; and wire, phone or airmail your wants to Air Associates!



## ONE SOURCE

What one AA warehouse may not have, one of the other three will—and teletype transmission between four AA sites makes fast turnplay... What we haven't got, we know where to get... And your order is filled and on the way to you as fast as mail, post office and aircar can carry it... Save time, grief and paperwork by doing business with one supply source for everything—instead of several... And for the largest airlines or lone owner, AA service is standard and the same... List the addresses below for ready reference in time of need.

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 AIRLINES  
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 COLONIAL  
 AIRLINES  
 AAA  
 AIRLINES  
 CONTINENTAL  
 AIRLINES  
 PCA  
 AIRLINES  
 Braniff  
 AIRLINES  
 NORTHWEST  
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 ALASKA STAR  
 AIRLINES  
 NATION  
 AIRLINES  
 INLAND  
 AIRLINES  
 WESTERN  
 AIRLINES

# Pace Setters for the World!



IMMEDIATELY after Pearl Harbor, the airlines gave up half their planes to a hard-pressed Uncle Sam. Then, as the tempo of war picked up and the nation demanded speed and more speed, the men and women who fly our sky routes won in one of the greatest jobs in transportation history.

Working against terrific headwinds in shortage of equipment, the airlines earned more and more. Passengers and freight increased. The load ratio was doubled from 10 to 12 "airmiles" (90%) in 1944. Planes put in more and more hours per day, and many were flying eighteen out of twenty-four, and only permanent orbital kept them going.

Through three long, tough years, maintenance crews fought the battle of the everyday wrench to keep America's precision, time-saving horde of commercial ships in the air and on schedule. Month in and month out pilots flew them over and careful . . . minded them for speed . . . hung up new safety records . . . delivered vital goods and people to keep the war effort moving at an ever faster pace.

Today, with relief in sight, the airlines are pointing the way for postwar America and the world. Against high labor and operating costs, they have increased and cut. Airline road mileage is up 6% to an all-time high of 82,557 miles. Freight carried is nearly four times

## Buy More War Bonds and Stamps

the prewar load. Total passenger miles last year were nearly a billion higher.

If our transports do such a tremendous job on the face of wartime shortages of personnel and equipment, what will it do in peace? With a great body of skilled pilots and mechanics to draw upon and sensible equipment of a quality, carrying capacity and operating efficiency that were secretly developed in the prewar days, the sky's literally the limit.

It will be a privilege for us to join forces with you today in building the coming Age of the Air<sup>®</sup>.

Look to Jack & Heintz for better things for flying!

**JACK & HEINTZ**  
*Incorporated*



Jack and Heintz Inc., Kansas City, Mo., manufacturers of aircraft engine starters, generators, propeller pitch, gear light instruments, compasses, radios,

## PERSONNEL

### Cregier Heads Sales For Commonwealth Inc.

John E. Cregier, Jr., formerly of Consolidated Valuair Aircraft Corp., San Diego division, has been appointed sales manager for the new division of the Commonwealth Aircraft, Inc., New York and Kansas City, Kan. He will supervise all sales activities on the company's new Transcon airplane which is slated for production within the next 30 days. Cregier has been associated with the aircraft industry and with airlines for more than 18 years.

**Richard W. Baker** (photo) has been appointed district traffic manager of American Airlines, Inc., in Philadelphia. Baker's appointment follows the previous winter when he was left vacant for the 18-month period that transoceanic arrivals at Philadelphia were suspended.

He has been with American since 1927 and has been reservations manager at La Guardia Field and also in Washington. Before going to Philadelphia, he was assistant manager of reservations and ticket offices for the entire system.

**Leslie B. Goharn** (photo), formerly treatment oculist at an AAF installation, has been appointed manager of medical divisional traffic manager for PAA. He and his associates will be based in New York prior to being assigned to duty in DIA. Goharn had been associated with Pan American Airways for two years with Pan American Airways and later with Vega Aircraft, a subsidiary of Lockheed. With Pan Am he served in Central and South America and in Mexico.

**Conover T. Robertson** has returned to American Export Airlines as flight captain, following a military leave during which he served as

supervisor of flight operations for the Air Transport Command at Presidio Field, Mo. He had been a pilot for Canadian Colonial Airlines and for United Air Lines. In 1942, Robertson was loaned to the Glenn L. Martin Co., to help in the test flying of the original Mars.

### John A. Smith Joins Contract Cargo Group

John A. Smith, formerly regional cargo traffic manager for Pan American Airlines in Los Angeles, has been appointed western traffic manager of the National Skyway Freight Corp. Smith has been affiliated with the air transportation industry since 1936, and as a director of both the Los Angeles Chamber of Commerce and the Foreign Trade Association, and a member of the World Trade Committee of the Los Angeles Chamber of Commerce. National Skyway Freight Corp. is the West Coast's newest contract non-scheduled air freight service.

**Former Army Air Forces Capt. Donald H. Sault** (photo), fighter pilot, has been appointed traffic representative in the air mail and air cargo department of the vice president of Braniff Airways, Inc. Prior to his Army career, Sault was manager of management of Braniff Airways, Inc. He holds the Distinguished Flying Cross and other AAF decorations received during his more than 300 hours of combat flying.

**Lee B. Hill**, vice-president in charge of industrial relations on the Pacific Coast, has been appointed general eastern divisional traffic manager for PAA. He and his associates will be based in New York prior to being assigned to duty in DIA. Goharn had been associated with Pan American Airways for two years with Pan American Airways and later with Vega Aircraft, a subsidiary of Lockheed. With Pan Am he served in Central and South America and in Mexico.

**Conover T. Robertson** has returned to American Export Airlines as flight captain, following a military leave during which he served as

the newly-created Bureau of Aviation. From November 1943, until joining the Commerce Department, Cudman held the position of district airport engineer of the Civil Aeronautics Administration in charge of airport activities in New York and New Jersey.

### Preston Mabry Appointed Republic Lightplane Aide

Preston H. Mabry, well known in aviation circles, has been appointed senior sales manager of the Personal Plane Division of Republic Aviation Corp., an experimental plane manufacturer since 1930, with about 3,000 hours of night time in his cockpit, Mabry was with the Civil Aeronautics administration until he joined Republic in 1943. Prior to his present appointment he was assistant director of market research, service supervisor, and a representative of the Personnel Plane Division.

**Stuart A. Corman** has been named manager of the News Bureau of American Airlines, Inc. Corman joins the airline after a long career in the newspaper advertising and public relations field, having served with the National Association of Manufacturers and later with the Fred Edman Organization, which directs public relations for the American Committee for United States Air Policy. He will make his headquarters in American's executive offices in New York City.

**Ivan Ballou** has been named tour promotion manager for Pan American World Airways. His activities consist of a fact gathering mission to assist in the preparation of a tour that does not intend to operate from Hawaii. Ballou is a veteran in the travel field, having been with Empirion, world-wide tour operators, prior to joining Pan American.

**Robert M. Erwin**, formerly associated with the Kaiser Laboratories on the Pacific Coast, has been appointed district traffic manager of Braniff Airways, Inc. at Denver. He has assumed the position left vacant by the departure of Capt. J. K. Weddington to Western divisional traffic manager. He was employed by the DuPont Co. Inc. a while in connection with the development of the storm bomb.

### Obituary

**Alfred Frank**, 76, founder of National Park Airways, which later became a part of Western Air Lines, died August 1, in Cincinnati, Ohio. Frank, a racing engineer, founded the first glider club in the U.S. in 1926. In 1930 he organized the first glider school in the U.S. In 1934 he became a director of Western Air Lines. He secured the first license from the Post Office Department to operate air service between Salt Lake City, Utah, and Santa and Great Falls, Mont.



## ELECTRIFYING the Road to Tokyo

Curtiss Electric Propellers now add to the demonstrated effectiveness of the Boeing B-29 Superfortress.

**Greater striking force—made possible by propeller weight reduction.**

**Slowed landing rate—through aerodynamic braking.**

**Automatically synchronized propeller speeds.**

**The unmatched durability of hollow steel blades.**

**The additional safety of electrical propeller control, unaffected by temperature and altitude and with minimum vulnerability to combat damage.**

These new advantages for the Superfortress on the road to Tokyo mean new destruction for the enemy and increased security for B-29 crews.

# CURTISS

Electric Propellers



## Making a 40-ton shock "DISAPPEAR"!

When a Skymaster hits the runway, the tremendous landing energy of this huge plane quickly "disappears". It's not an act of magic, but the shock-absorbing ability of Aerol landing gear that does the trick . . . The remarkable stamina and efficiency of Aerols, which protect plane, crew, and cargo from landing shock, account for their universal acceptance for major types of aircraft . . . Our products, serving many industrial fields, are mentioned below. Whatever your needs, Cleveland Pneumatic engineers offer you the benefit of over 50 years manufacturing experience.

THE CLEVELAND PNEUMATIC TOOL CO., CLEVELAND 5, OHIO



# The ATOM NEW SOURCE OF ENERGY

## *A Tide in the Affairs of Men*

On August 6, 1945, an atomic bomb exploded over the Japanese city, Hiroshima.

Its concussion blasted the city, vaporized the fibre of Japan's will to resist, and flashed across the world a light of such glaring intensity that even blind eyes could glimpse the forged road that is presented to humanity's choice and destiny.

It has been a scant fifty years since Pierre and Marie Curie embarked upon their research with the avowed intent of discovering "how the stars of the universe are put together". Their work contributed radium to the knowledge and use of mankind, but it marked only a way station upon the awesome quest which they announced and which thousands of scientists have since pursued.

Under the compelling stimulus of war, the first major application of the release of atomic force has been in an instrument that raises by an unimaginable dimension our ability to date out death. We can be devoutly grateful that the scientific leadership of the Allies, and particularly the industrial strength of the United States, brought to us, rather than to our enemies, priority in the development of this dread weapon. But even in its present infant phase, it is clear that ownership of the principle of the atomic bomb carries a trusteeship of terrifying gravity.

We hold in trust a power that is capable of unravelling the very fabric of our civilization.

Equally, it may be susceptible of development as a mighty force for human welfare. But we have proved the destructive use, while the constructive applications are still in the realm of speculation.

Clearly the trust is of a magnitude that transcends national jurisdiction. No walls have ever been built high enough to frenzies in the spread of scientific knowledge, and even if we were resolved to forego the harnessing of atomic power for peace, it is hopeless to think that its application for war can be held for long as the monopoly of one, or a small group of nations.

At one giant stride our scientific and technological development has as far outdistanced our social engineering, that we have no choice but to turn our full power of creative imagination to control the forces we have unleashed and to bend them to man's use rather than to his destruction.

Since control is not possible without understanding, I have asked several of my editorial colleagues in the McGraw-Hill organization to present on the pages which follow a non-technical but authoritative account of the known facts and implications of atomic power.

*James H. W. Kawafly.*  
President, McGraw-Hill Publishing Co., Inc.

# HOW ATOM SPLITTING RELEASES ENERGY

Five years ago the world learned that the atom of Uranium 235 had been split, releasing energy at the rate of about 11,400,000 kilowatt-hours per pound. The whole amount tested was less than the head of a pin, but there was no escaping the possibility that bombs, engines, turbines, jets and explosives could be powered by atomic energy. Then began the race to win the war with atoms.

With what help Engbald could give, America can now the best atom-splitting team Germany could manage. It was all done in silence. From the summer of 1940 until the atomic bomb blasted Hiroshima, black secrecy masked history's most amazing scientific and industrial accomplishment.

Coldly scientific in form, the War Department's "Smyth Report," released August 12, 1945, traces

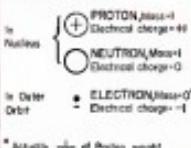
the fantastic course of atomic engineering through the five years of new bloodlet. It leaves no doubt that only a complete mobilization of America's technical resources could have won this victory at time.

Other writers in other places will unfold the epic story. This presentation leaves no space to reflect the glory of the accomplishment or even to reveal its history. The aim is more immediately practical

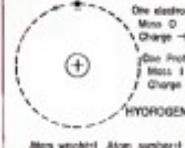
— to give the professional and business readers of the McGraw-Hill publications a sound and honest, though non-technical, understanding of this atom-smashing business, so that they will know how to do about it in their personal and business lives.

Now step one: learning the shape of atoms and how atom splitting releases energy.

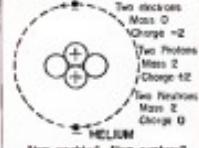
## 1 ATOM PARTS



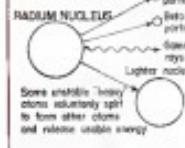
## 2 SIMPLEST ATOM



## 3 TYPICAL ATOM



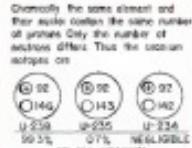
## 7 RADIODACTIVITY



## 8 NATURE'S HEAVIEST ATOM



## 9 ISOTOPES

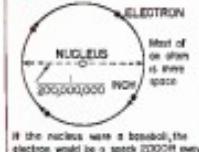


Each of the 92 elements has its own atom, yet all atoms are made from the same three pieces, Fig. 1: protons (weight 1), electrons (charge -1), and neutrons (weight 1, charge 0), electrons (weight 0, charge -1).

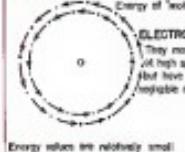
Every atom is a tiny "solar system." Its central "sun" has one or more protons, generally neutrons too. The revolving "planets" are electrons, one for each proton. In addition, because plus and minus cancel balance at the atom,

the opposite charges attract, but high speed keeps the electrons out in their circular orbits, just as the centrifugal tendency of the revolving earth keeps the sun's gravitational pull. All the weight of an atom is in the nucleus, so add the number of protons and neutrons to get the atom's weight. The atomic number is equal to the number of protons. The elements are known by their atomic numbers. Thus uranium (92 protons) is element 92.

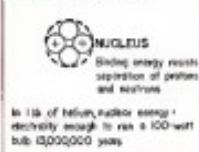
## 4 ATOM SIZE



## 5 ELECTRON ENERGY



## 6 NUCLEAR ENERGY



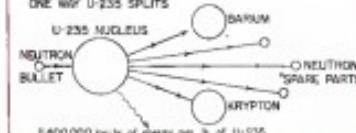
The almost weightless speeding electrons, Fig. 5, supply all the energy of chemical reactions (as when coal burns or TNT explodes). Evading all ordinary chemical actions, the immensely greater energy bound up in the nucleus, Fig. 6, can be released only by direct hits on the nucleus to break the bonds that hold the protons and neutrons in a tight bundle.

## 10 ENERGY RELEASED

When nucleus at U-235 atom is hit by neutron bullet it explodes to form lighter atoms and spent neutron whose combined mass is less than mass of U-235.

Lost mass is transformed into energy—Einstein's Law:

ONE WAY U-235 SPLITS



## EINSTEIN'S LAW:

$$\text{One pound of deuterium} = 1,400,000,000 \text{ kwhr}$$

$$\frac{\text{mass}}{\text{mass}} \times \frac{\text{mass}}{\text{mass}} \times \text{energy} = \frac{\text{energy}}{\text{mass}}$$

Applying the law to U-235 split:

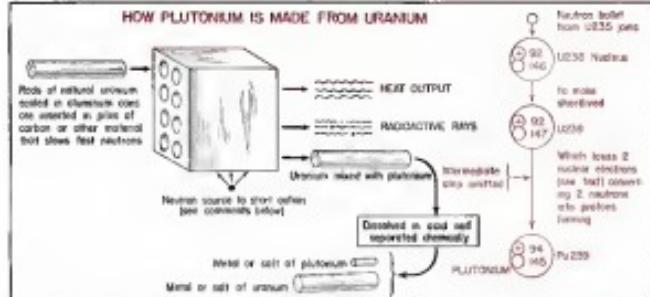
Explosive products are found at U-235 weigh 0.99990 lb., so 0.001 lb. of the mass is converted into  $0.0001 \times 1,400,000,000 = 1,400,000$  kilowatt-hours of energy.

produced and directed and how a chain of self-propagating atomic explosions may sweep through a block of U-235 like a forest fire to release heat energy equivalent to 11,400,000 kilowatt-hours per pound.

CONTINUED ON NEXT PAGE

# CREATING and ISOLATING

## Man-Made Plutonium — U-235 Substitute



We now have two kinds of atoms suitable for energy supply, Uranium 235 and the new man-made element No. 94, plutonium. Uranium, No. 92, is the heaviest atom of any natural element.

The Hanford Project's plant, on the Columbia River at Pasco, Wash., is the world's greatest atom-making factory. Devoted entirely to the mass production of plutonium atoms, it uses U-238 as the raw material and U-235 as the energy source, intimately mixed in the same proportion as in natural uranium metal.

The production units at Hanford are several huge uranium "piles." Each is a very large block of graphite with holes in which are placed uranium metal cylinders, sealed in aluminum cans to protect the uranium from corrosion by the cooling water constantly passed through the pile.

Each pile runs itself, so to speak. Not even the conventionally pictured bits of radium, beryllium, and paraffin are needed as a "pilot light" to start operation. There are always enough stray neutrons, or even cosmic rays, to start a chain reaction.

But once started, the design, size and control of the unit must be such that the chain reaction will continue at an even rate — neither die down nor overshoot into an explosion.

To see this picture in atomic terms, consider the fraction of a second in which one million U-235 nuclei are split, producing two million lighter atoms [say, one million of barium and one million of krypton], and between one and three million fissioning neutrons predominate.

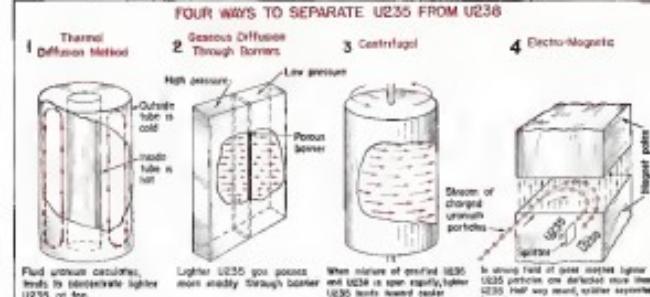
Since these escape in free flight right through the relatively vast atomic "open spaces," some are "captured" by the many U-238 nuclei, and others are scattered by the barium. But, on the average, of the one to three million, just one million neutrons exist unscattered, another million U-235 atoms in the next fractions of a second. Thus, with reproduction rate exactly maintained, life goes on in the atomic-energy pile.

The outcome, one of several possible "moderators," seems to show down the neutron without capturing many. The chance of a fast, straight-going neutron hitting a tiny nucleus is very small, whereas the "slow ball" neutron is likely to be soaked up by the paraffin jacket if it would otherwise be a scatterer.

The use of normal uranium in the Hanford pile seems extremely attractive as a heat source, but has certain unusual requirements. Only a small part of the U-235 is used up before the pile must be shut down to remove the plutonium.

# THE HIGH-POWER ATOMS

## Isolating U-235 — a Gigantic Task



Most of the uranium ores, including most samples of pitchblende and carnotite, will yield from 1 to 15% metallic uranium. Chemical separation of the metallic "natural" uranium is simple. Whatever the source, natural uranium contains the three isotopes in the constant proportions of 99.3% U-238 and 0.7% U-235, with traces of U-234.

Separating the U-235 from U-238 is an operation essential for explosive uses of U-235, and probably important for future commercial controlled-chain piles. It has been most difficult. Chemical separation was impossible because U-235 and U-238 are chemically the same.

The only possibility was a separation

by physical differences, primarily a one percent difference in weight. The processes hitherto used, centrifugal methods pictured above required evaporating a salt of uranium. All the methods shown have been used or tried on the Manhattan Project. All require many stages to achieve a substantial concentration of Uranium 235.

## Dollarwise Thoughts on Atomic Energy

Cuts more like a knife than a scimitar. In war, last war, fine time of U-235 and plutonium, must pay the dollar not in competition with coal, fuel oil, natural gas, gasoline and electricity.

On the basis of energy costs only, "all other things being equal," the table on the last page of this section shows at what price per pound U-235 would give the same energy cost as conventional energy sources selling at the indicated prices. For such comparisons it is convenient to remember that one pound of U-235 is equal (in ergs/gram) to about 11,400,000 kilo-calories, also to 15,000 tons of coal, or 200,000 gallons of gasoline.

Fuel engineers understand the limitations of such oversimplified comparisons. Others should be warned that "all other things" are never equal

plus a high enough temperature for practical production.

If we go to the other extreme and build a small pile, using concentrated U-235, we shall run into enormous material costs, perhaps several times the \$20,000 per lb. set down in the table as the equivalent of 20-cent gasoline.

If this were the whole story, coal would have to sell for a dollar a ton to break even with U-235 as a winter heater. However, the pile using natural uranium must be forced to hold its own in a chain reaction. More important, the surrounding fissile products ("poison") the reaction after only a small part of the U-235 has been used up. Then the uranium cylinders must be removed for plutonium recovery. Finally, it has not yet been found possible to operate the natural-uranium

plants more than the price of Uranium 235 in various concentrations and the characteristics of piles suited to them. No such information is yet available. We must also watch the danger from radioactivity, the requirements for radiation shields, explosion hazards, etc.

CONTINUED ON NEXT PAGE

## WHAT TO EXPECT

Before discussion of possible and probable future applications of atomic energy to the arts of peace, the atomic bombs should have consideration. We may assume that these bombs contained from two to 200 lb. of either U-235 or plutonium, or both. No more sensitive information is available.

Details of the bomb design have been completely suppressed, but the following basic considerations are stated or implied in the South Report:

The explosive in a bomb must be highly concentrated U-235 or plutonium. Since slow neutron could set produce a fissionary explosion, the neutron moderator or moderator, is introduced. This, in turn, acquires a U-235 mass so large that the escape of neutrons without hitting nuclei will set off excessive. For every 1000 atoms hit, the neutron produced must split near than 1000 new atoms, so that the reaction will proceed rapidly in an explosive chain, as sketched below.

**CLAIMS LIKE THESE ARE NOT JUSTIFIED**

1. Pretty soon no more coal will be mined except as a raw material for chemical manufacture.
  2. In a few years a tiny bit of uranium, built in at the factory, will drive your car for life through an engine no bigger than your fist.
  3. All the big central stations will soon be running on atomic power.
  4. Cheap atomic energy will enormously reduce the price of power.

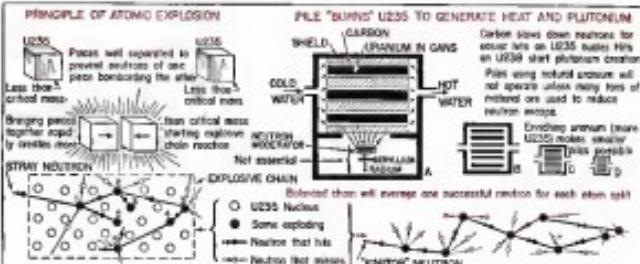
critical mass. At the appointed moment these could be brought together within the bomb to create a super-critical mass, which would then explode automatically.

#### Practical Applications

Except possibly for superheating operations, uncontrolled explosive reactions cannot be permitted in the peaceful use of atomic energy. This means that the quantity of U-235 assembled in any one spot must always be kept well below the critical weight to avoid spontaneous explosion.

Depending on the particular application, the most desirable concentration of U-235 may range anywhere from the 0.7% in naval uranium up to 100%, with the probability that

and may well be possibly the



## **FROM ATOMIC ENERGY**

#### **...BUT REMEMBER THESE FACTS**

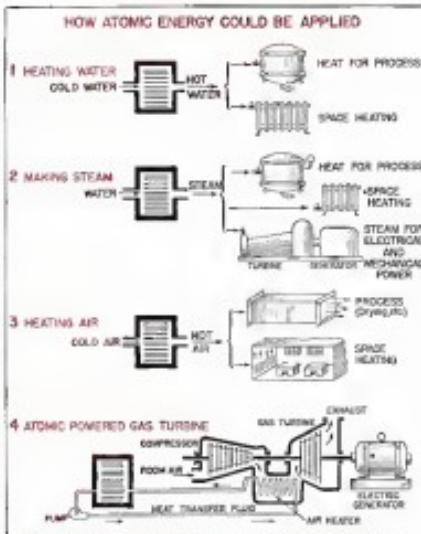
1. The large-scale, controlled release of heat energy from U-235 has been fully demonstrated.
  2. Beyond question, this energy could be applied directly for heating water and air, and making steam.
  3. Such heat, in turn, could be applied directly, or converted into mechanical power or electricity by conventional steam turbines and gas turbines.
  4. If and when U-235 in concentrations up to 10% costs less than \$25,000 per lb., it may find applications, but will compete, at first, with premium fuels rather than coal.

shown for the gas turbine would, of course, have to operate at temperatures up to 1200 F. There seems to be no basic reason why the pile itself could not be built inside the compressed-air receiver, discharging its

heat directly to the compressed air. With rather high concentration of U-235, this arrangement might be suitable for large airplane drive if excessive weight of radiation shields could be avoided.

Also, presumably, rockets and planes of the "heatbomber" type could be powered by atomic heat delivered to the air of the jet steadily, not in puffs.

The sketches signs direct applica-



Direct air intakes for fixed delivery of atomic piles heat to air turbines at temperatures above 1000°F could operate gas turbines.





#### 'STRATOVISION' TRANSMITTER:

Canary drawing of the Martin-designed plane, estimated as the long range reference relay (AVIATION NEWS, Aug. 13). Under plans finalized by Martin and the Westinghouse Electric Corp., 14 of these aircraft would be used at various locations across the country. Powered by two 4,615-hp. engines, the planes would cruise at about 250-mph. Only indications as to size or weight they could be "almost as large as the B-57, but weighing only one-third as much." Pilots would be manned by crews of three and use radio television.

one large propeller manufacturer and the reversible feather is deliverable in four weeks, but will not be applied on a large scale until it can be done with little or no increase in weight, cost, and complexity, and with very high reliability.

#### Ryan Retains Workers Despite Large Cutbacks

Despite a cutback of approximately 45 percent in its Navy orders, Ryan Aeronautical Co. expects to keep employment of production workers at near the wartime level. This is made possible by an extension of the contract delivery time until the latter part of 1942.

Under the original terms, deliveries were to be sharply increased for the balance of this year. Now, production will be peaking at the July rate. Also fearing a high employment level will be the return to the parent plant of assembly work formerly done by subcontractors.

**Other Workers**—While these two factors will add direct production workers, Ryan assures that substantial reductions will have to be made in office staff, tooling, production control and other employees not engaged directly in turning out Ryan fighters.

#### War Modification Plants Terminating

Standby status contemplated for some at AAC, Navy facilities for late design change fasts work.

End of the war is bringing a quick end to AAC and Navy modification centers which were set up to incorporate late design changes, dictated by combat experience in part and add instruments so that factory production lines would not be slowed.

Work in AAC modification centers was the first to fall off. Terminations in now being Navy modification centers with the one at Elizabeth City, N. C., as an example. There has been a complete cancellation of work there, which specialized on PBY and PBM changes. No decision has been made as to what will be done with the facility. Plans are expected to include a standby status for the plant.

**Airline Contracts**—The contract under which Continental Air Lines for over three years has operated the Continental-Beaver modification center for the Air Technical Service Command has ended. Robert F. Six, Continental president, disclosed that the total number of planes modified by the center included work on 3,135 Boeing B-

17's, 28 North American P-51 Mustangs, six British heavy bombers and 482 Superfortresses.

At peak employment in February of this year, the center employed about 2,200 workers. The center did nearly 1,200 different kinds of modifications ranging from simple wartime changes to major engineering projects.

The big Navy modification center at Lockheed Park, Ariz., operated by Goodyear Aircraft, is scheduled to finish within 90 days. It has been working on PB4Y Convair Pinchers. Consolidated Vultee is expected to deliver its last Pincher to Lockheed Park soon after mid-November. Other modification centers see in the process of being closed.

#### Australia Cuts Aircraft Output

According to John Stacey, director of the Research Division of the Australian Department of Aircraft Production, the output of Beaufighters, Mosquitos and Manly bombers that Australia will be continuing. It is expected certain units at Australia will continue to produce jet-propelled trainers and fighters and rigid canard bombers and transports. The production program, as now seen, includes four-engine Lincoln bombers for the R.A.F. forces, and Tudor passenger planes.

The peace-time aircraft industry of Australia will employ about 10,000 workers, a reduction of some 30,000 from the present basis, but no time has been set for the discharge of the surplus workers.

#### TBY 'Clearance'

Termination of the TBY-2 Ground control at Cascades Center at Cascade Valley, Allentown, Pa., is planned in proceeding, with new rocks totaling five carloads of material, most of which was stainless steel from storage areas.

Work has started on clearing the main runway and preparing operating areas also. Virtually all possible direct sides of asphalt materials to other contractors have been released. What remains remain are being reported for disposition on Oct. 1. Contract Settlement forms Contract termination prepared, will cover a wide variety of materials and components, including propellers, engines and turbines.

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and

# Aviation

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## Scraping of Big Air Engines Seen Result of RFC Test Sale

Surplus units in excess of 600-hp. believed headed for scrap pile; officials indicate disposal policy is foregone conclusion despite auction of 19,000 powerplants to study market.

A forthcoming attempt by the Reconstruction Finance Corp. to test the market for the disposal of surplus aircraft engines is seen as a prelude to a recommendation that engines in the higher power categories be scrapped.

At a recent discussion with representatives of the aviation press, RFC surplus property officials announced bids would be accepted between Oct. 1 and May 14 on the purchase of a total of 19,000 engines. While the engine selected was designed to supply powerplants in sets, Col. Frank J. Murphy, now chief of aircraft disposal, strongly intimated that he expected the results would indicate scrapping as the best solution to the complex engine disposal problem (AVIATION NEWS, Sept. 5).

**Final Test** — The number of engines that eventually will be declared surplus is unknown, although Col. A. E. R. Petreka estimated it may be as high as 250,000 to 300,000. The majority of these will be over 800 horsepower, and are expected to be the most difficult to sell. Of the 19,000 engines to be put on sale next month, 40 percent are in that category.

Despite the general belief that lower-powered engines will find a ready market, it was disclosed by the RFC that few will have service records or logs available.

In order to obtain CAA certification, which most will have to do completely soon, dealers' authorities insist that would practically preclude their utilization by the average aircraft owner.

**Answers Sought.** The objective of the initial sale is to determine whether these 19,000 continental aviation use for the engines, there is any controversial non-airworthiness use; it is possible to establish price scales according to engine model condition; scrapping is the only answer; owning agencies should scrap the engines without ever destroying them surplus.

The engines being offered for sale are in two categories: Standard types and models either currently in commercial use or believed to have future markets.

Obsolete types or models suitable

for commercial use only after extensive modification.

Prizes which RFC will consider will be based on the category of the engines. Those in category one will be sold at prices approximating those of the manufacturer's Guide for prices of the other engines will be "maximum net return to the government."

Because of the feasibility of that scale, and also because this offer is to be considered a test, Col. Murphy indicated that perhaps no sales would result from his bid.

**Condition Problem.** Further complicating the picture, from the prospective buyer's viewpoint, is the fact that RFC cannot warrant the condition of the engines. No information is furnished by the owning agency. Approximately one-half of the 19,000 engines are crated and these cannot be inspected by an interested purchaser.

## Engine List

Totalization of surplus engines in a test sale to be conducted by Reconstruction Finance Corp., beginning Oct. 1. Figures column is as reported to RFC by the owning agencies.

Manufacturer	No. Per Unit
Pillsbury	24 1,250
Beech	31 2,250
Boeing	6,000 2,250
Allison	3,000 1,250
Pratt & Whitney	4,000 1,250
Geared	2,000 1,250
Westinghouse	1,000 1,250
Total	20,000 1,250

Reported Condition	No. Per Unit
Not Yet Disassembled	200 1,250
Used, Good, Without Defects	6,000 49,500
Used, Good, With Repairs	12,000 49,500
Used, Fair, With Repairs	1,000 1,250
Total	20,000 1,250

Total units: 20,000  
Manufacturers: 10  
Model: B-36  
Power: 1,250 hp  
Date: 1945

The balance are in war-worn aircraft. While these may be inspected, no parts may be pulled out for examination.

## Engineering Production Picture

Effect of end-of-war contract cancellations on aircraft manufacturers is becoming a little clearer, even before the full disclosure of the Navy's future plans.

While the main plants of the nation's best producers are still intact, the lack of work that was in progress at the time of the end of hostilities appears largely built around new types.

Pratt & Whitney has been in the works of B-3699 for experiments, and a new B-3698 for studies.

Wright Aeronautical believes it will be some time before its Cyclone 11B-B36 will be engaged for large transports and commercial in keeping production facilities for that powerplant at the ready stage.

Additionally, Wright is progressing on its gas turbine engines and anticipates it will be the first of its kind on the market.

Overall, the present production picture is not too dismal due to the tremendous number on pipelines and on hand when the war ended. Many of these will be suitable for new aircraft shortly to come off production lines.

**B-36.** With new engine manufacturers now being established entirely on PW plants at East Hartford and Somers City, and at the Nash Kelvinator facility at Kokomo, Ind., Allis and Wright have been hit hard, with the Wright plant at Hartford closed.

More than 1000 PW engines and those available from Army surplus is said to be enough to supply Navy's aircraft program through July, 1947. There is a large surplus of B-3699-8 engines which PW would like to have better distribution to civilian customers.

PW's Navy contract is expected to be modified to call for a new high-power, low-weight engine for Navy fighters. This is the B-3698-16 which will replace the B-3698-15W.

**Undisputed.** Although our source indicates Navy orders to Wright will be less than 75 engines, it is a definite possibility they may be undertaken. This engagament indicates potential purchases of present commitments, and further utilization of the B-3698 will require all their facilities for some time to come.

## AIR FORCES

### COMMENTARY

## German Turbo-Jet Powerplant Revealed As Compact, Efficient

Bayerische Motoren Werke model 003, scheduled when Reich fell, for full production this fall, said to present excellent possibilities for further development; approached 2 to 1 thrust-weight ratio goal.

As Allied technical experts learned their various "targets" where valuable information was expected, it soon became evident that there was such a wealth of material that some specialization between countries and services was essential in the interests of efficiency and speed in obtaining the necessary data, but with the final results of the total team eventually available to all.

In the field of gas turbines for jet propulsion (turbo-jet), it was decided that the British should concentrate first on the Jumo 004, which was the unit farthest along in production and operational use. The U. S. Army Air Forces were given the BMW 003, and the U. S. Navy the Heinkel-Hirth 004-1239 Project. The Bayerische Motoren Werke, with seven factories in the Munich area, began experimental work on turbo-jet engines in 1936, and by 1938 the BMW 003 project was definitely decided upon.

The unit had its first test-stand runs in the summer of 1941, and something over two years later was test-down in the twin-jet Heinkel 162 fighter. About the middle of 1946 it was flown in the improved model, the HE-260.

Neither of these aircraft went into operational use, but apparently this was not the fault of the turbo-jet, as the 003 has turned out to be an efficient, compact unit of simple design, with excellent possibilities of further development.

**Blended Power**—It was the powerplants of the early model of the light-weight jet fighter, the Heinkel 162 Volksjäger. The 003 was in limited production in the spring of 1946 and was scheduled to go into

quantity production (possibly 1,000 per month) by this fall.

The first sub-type was the 003A, and the records indicate that this unit was scheduled to go into certain versions of the Arado 234, while Jumo 004's were installed in others.

The 003A had a sea-level static thrust of 1,760-lbs., at 560-rpm. sea level, 1,650-lbs., and at 36,000-ft. (5000-rpm.), 355-lbs. or 759-lb. (This is based on the fact that one

### Rocket vs. Jet

When the question is asked, "What is better?" the answer will be between the rocket engine and the turbo-jet, not man-made engine in the selection of power source, P. A. Collier, chief aerodynamics engineer of Lockheed Aircraft Corp., Los Angeles, attests. In his words, "Loss of altitude is the fatal enemy of the beauty of aerospace engines."

Col. Steven A. Bowditch, Jr., jet propulsion authority and commanding officer of the Army's 48th Jet Propulsion Group, who reviewed jet and rocket theory and performance as a guest speaker at the conference, opened way for the prediction when he cited the negligible overall efficiency of the rocket at 10,000 ft. and above.

**Short Efficiency**—Under audience questioning as to the reason for continued interest in research throughout the country, Colonel Bowditch and Col. George, chairman of the session, explained that at present the range of the jet engine of the intended will increase notably and bring it into range for use as a prime mover.

pound of thrust as equal to one horsepower at 275-rpm.; at 390-rpm. the horsepower figure is therefore one-third greater than that shown for the pounds of thrust.)

**Planned Improvements**—Other versions of the 003 develop almost 2,600-lbs. of static thrust power, with a projected model in the 27,400-lbs. bracket. With a weight of 1,536/1940-lbs., this would be approaching the 2-lbs. thrust/lb. of weight ratio, a definite goal for this class of engine, and in this respect far ahead of the yardsticks for the competing engine, which is one pound horsepower.

(As there have been statements in the press indicating that American technical developments in jet propulsion lag behind those of the Germans, it may be pointed out that one American design, the GE unit in the P-80, a larger and improved development of the original Whittle engine, has a ratio of pounds of thrust to pounds of weight of better than 2 to 1.)

The 003A consists of a 4-stage axial compressor with a single-stage turbine; the bleed-flow type of compressor permits a considerably quiet运转.

Weight, 1,344-lbs., length, 11-ft., 1-in.; width, 2-ft., 4-in.; height, 2-ft., 10-in.;

**Pursi** used is 12 (diesel oil) or 42 octane gasoline. Starting of the engine is provided by an electrically-started motor which cuts out at 2,800-rpm. Maximum rpm. of the unit itself is 9,500.

The 003C sub-type had a Brown Boveri type compressor, possibly with six stages. Other improvements led to an augmented thrust for this version of 1,900-lbs. static at sea level. This unit was only partly developed.

A projected development embodying further improvements was the BMW 003D which was designed to deliver more than 2,400-lbs. of static thrust at sea level. This was in the drawing board stage.

Other BMW projects included two much larger aircraft gas turbines, the 003B turbo-jet and the 003B gas turbine for propeller drive.

**Data Gathered**—The project officer assigned to secure this material at HE-260 was Major Rudolph C. Shultz, who related some of his experiences in obtaining this data at a recent AAAF-Lockheed-General Electric press conference in New York.

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## FINANCIAL

### Pan Am Stock Acquisitions Highlight July SEC Report

Officers and directors add substantial amounts to personal portfolios; nine continental airlines now transact; Avem Air Associates, Ryan lie heaviest security trading among manufacturing group.

Securities and Exchange Commission summary of July security transactions and holdings disclosed the acquisition of substantial amounts of Pan American Airways Corp \$2.34 per share capital stock by officers and directors through the exercise of warrants.

John T. Tripp, president, acquired 16,813 shares, increasing his holdings to 30,829 capital shares. In addition, reported holdings of 50,000 shares through trusts and another 300 shares as a "claim against borrower of shares."

Other Buyers—S. M. Fairchild, director, acquired 3,000 shares and sold 2,000 shares, increasing his holdings 1,000 shares to 20,000. Harold M. Moore, vice-president, held 3,000 shares at the close of July after acquiring 1,000 shares. A similar number of shares were purchased by Vernon F. Taylor, director, who likewise held 3,000 shares at the end of July.

Other increases in holdings through the exercise of warrants and the number of shares owned at the close of the month were: John C. Cooper, vice-president, 942 shares to 1,038; George L. Rife, vice-president, 738 shares to 2,100. H. Preston Morris, director, 666 shares to 1,000; J. Clawson Keep, vice-president and treasurer, 566 shares to 1,546; Robert Lehman, 566 shares to 1,000. Howard D. Dean, vice-president, 500 shares to 1,546; S. Sloan Colly, director, 135 shares to 488; Charles Francis Adams, director, 100 shares to 300. Prescott S. Bush, director, 90 shares to 130.

►PCA—Sale of 700 shares of Pennsylvania-Central Airlines Corp. common stock was reported by Lorenz Petersen, director, who had 7,384 shares in his portfolio at the close of July. Petersen filed a report for June, which showed the

sale of 4,000 shares of the company's common stock.

►UAL—Gardner Cowles, Jr., director of Gardner Air Lines, Inc., reported the purchase of 500 shares of the common stock by Register & Tribune Co., bringing the shares held to 10,200 shares.

►TWA—Orville P. Ryan, vice-president of Transoceanic & Western Air, Inc., purchased 149 shares of the company's common stock in June, reducing his holdings to 11,381 shares. Ryan reported that his wife had 566 shares.

►WAL—E. H. Duerkotter, executive vice-president of Western Airlines, purchased 263 shares of the common stock, increasing his holdings to 11,140 shares, while Thomas Wolfe, vice-president, sold 200 shares, reducing his holdings to 313 shares.

►NEA—A. Jane reported by Eugene L. Vihel, director of Northeast Airlines, Inc., showed the sale of 500 shares of the common stock, leaving him 30,300 shares at the close of that month.

►NAL—E. P. Tedder, director of National Airlines, Inc., bought 50 shares of the company's common stock, which represented his entire holdings in the company at the end of July.

►EAL—A report for May filed by Paul H. Hartman, vice-president of Eastern Air Lines, Inc., disclosed the purchase of 453 shares, increasing his ownership to 4,243 shares. John E. Phillips, a director, reported the sale of 200 shares of Eastern's common stock through a trust, leaving the trust with 5,280 shares. Another trust held 840 shares at the close of July, while 625 shares were held through a third trust.

►BNF—Charles E. Beard, vice-president of Braniff Airways, Inc., increased his holdings of the company's common stock to 1,235 shares through the purchase of 100 shares.

►CAL—William M. Boyle, Jr. and Carl O. Hoffman, two new directors of Colonial Airlines, Inc., filed reports showing their holdings of the company's common stock. Boyle, Jr., had the ownership of 3,000 shares, while Hoffman holds 1,000 shares.

►Grumman—Among the manufacturing group, Leroy B. Grumman, president and principal stockholder of Grumman Aircraft Engineering Corp., sold 400 shares of the common stock, leaving him an ownership of 35,700 shares. Edward W. Poor, treasurer, reduced his holdings to 11,990 shares through the sale of 1,000 shares.

►Ryan—T. Claude Ryan, president and principal stockholder of Ryan Aeromarine Co., reported the sale of 1,200 shares of the common stock in June, reducing his holdings to 35,381 shares. Ryan reported that his wife had 566 shares.

►Becht—Thomas D. Neelsland, Jr., director of Becht Aircraft Corp., bought 250 shares of the company's common stock during July, giving him 201 shares in his portfolio. Other transactions unlisted. Sale of 100 shares of North American Aviation, Inc. capital stock by Robert A. Larrivee, vice-president and treasurer, leaving him 186 shares; sale of 50 shares of Glenn L. Martin Co. common stock by William K. Ebel, vice-president, leaving his holdings at 546 shares.

Purchase of 1,000 shares of Aviation Corp. capital stock in May by Arthur W. Herrington, director, increasing his holdings to 1,300 shares; purchase of 103 shares of Consolidated Vultee Aircraft Corp. \$1.25 cumulative preferred stock by Neal Dew Becker, director, representing his entire holdings at the close of July.

►Gilbert Colgate, director and principal stockholder of Air Associates, Inc., reported the sale of 3,000 shares of his company's common stock in June. At the close of that month his holdings consisted of 12,348 shares.

►Braniff Airways, Inc., was honored the certificate of the "Highest Merit Award" by the National Financial Council for distinguished performance in reporting for its annual 1944 financial statement to stockholders. A survey of 1,250 financial reports was made by the magazine.

►A concise study of airplane crash fire fighting has been published by the National Fire Fighting Assn., International, of Boston.

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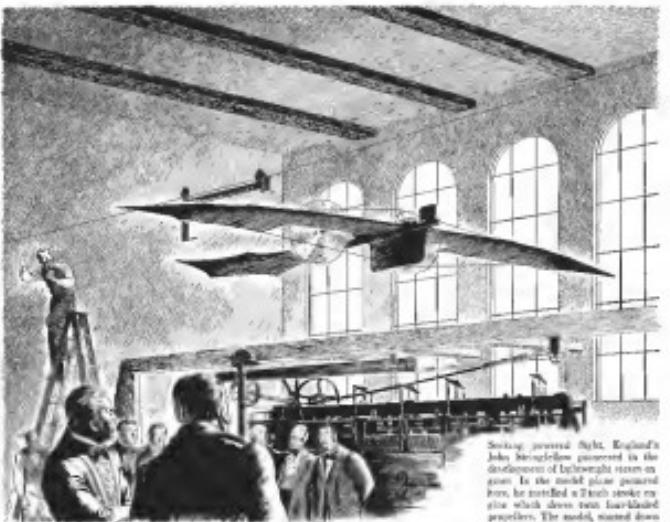
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Lift divided by Drag equals "X." As we increase the lift which is caused by air passing around the wing—*or* as we reduce the Drag caused by the plane's passage through the air—we get a better "X." We get an airplane that flies higher or faster or carries greater loads on less fuel.

Compare, for example, the improvement that has come in Lift surfaces. The fragile biplane wing of the

past had just enough lift to leave the ground. The modern Northrop-designed 46 foot wing of the Black Widow P-61 carries 30,000 pounds of plane and bombs into the stratosphere. And even this Northrop wing is only a beginning.

Major developments to cut down Drag also have come from Northrop . . . including the first multi-cellular internally-braced wing in 1939, the

stressed skin fuselages in 1938; innovations in wing and fuselage shapes in the 1941 Northrop Gamma and lighter, smoother construction through heliarc welding of magnesium, 1946.

Improving the Lift-Drag ratio is a continuing project at Northrop. Northrop is set to better the ratio, not only with new improved types of propellers, but also with new types of planes like the Flying Wing, which eliminates nearly every Drag element.

Northrop Aircraft, Inc., Northrop Field, Hawthorne, California.

Creator of the *Black Widow*

P-61 Night Fighter and the *Flying Wing*

**NORTHROP**



## TRANSPORT

### C-54E's Allocated to Airlines As New Equipment Flow Begins

Sophus Property Board announces 100 to 200 four-engine planes will reach carriers for commercial operation within ten weeks; first 20 passenger versions slated for three lines awarded North Atlantic routes.

By MERLIN MICKEL

Allocation of 20 C-54E's as the first of 100 to 200 four-engine C-54's to go to the airlines in the next eight to ten weeks for commercial operation was announced by the Sophus Property Board over the weekend.

The first 20, as had been predicted, will go to the three U.S. flag lines recently certified to fly North Atlantic routes. Eight will go to Pan American Airways and six each to American Airlines System and Transcontinental & Western Air. The planes are of the latest passenger-equipped type.

**More Coming**—Only #7 C-54E's were built, and of this number about 55 are expected to be declared surplus for domestic and foreign airline allocation in the near future. The remainder of the 100 to 200 due in the next two and a half months will include a large proportion of C-54H's, cargo equipped but readily adaptable to passenger use. All in this group would eventually for the Army.

Although it first allocated is going to U.S. lines, SOP says additional equally good four-engine equipment will be made available to foreign airlines soon.

The outlook is good for additional four-engine equipment, beyond the group of up to 200, by the end of the year. General Harold L. George, commanding general of the Air Transport Command, is known to have told the airlines that he expects to be able to obtain release of a total of approximately \$30 C-54 cargo planes to the airlines beginning this month and continuing through next June. Declared surplus by the War Department, they would go to the carriers on a lease basis.

**Two-Engines**—Prospects also are favorable for early release

to the airlines of additional twin-engine equipment of the DC-3 and DC-4, somewhat earlier than the next few months, and five C-45's are due in the next month or October. The airlines soon will be able to obtain all the C-47's they desire. Since that is a cargo version of the DC-3 just recently converted to airborne passenger needs, the initial demand is not expected to be large. A few more Lockheed Lodestars also are to become available before the end of the year.

These developments will provide the start towards a much-needed clarification of the surplus picture, hitherto so confused that the airlines, not knowing what former military planes would be available, have been at a loss for accurate determination of likely needs for either surplus or new equipment.

Estimates of the cost of converting the C-54 military transport to airline use vary widely from a mid-range figure of \$150,000, and there are other factors that will have a bearing on the demand for surplus four-engine units. Base price, lease cost, time required to convert, availability of conversion parts, and the outlook for new equipment off the production line are among them.

**DC-4**—Prior—Douglas Aircraft Co. has been giving a price on new DC-4, commercial version of the C-54, of about \$460,000. Pending a decision in an earlier circle that Douglas will peg the cost of initial DC-4's at \$450,000, \$350,000 for the 36-passenger pressurized defense model and \$250,000 for the 44-passenger high-density version. The possibility is strong that the Santa Monica company will not manufacture a DC-4. Army release to the airlines of C-54 transports, for step-up use pending DC-4 deliveries, will be the determining factor. United Air Lines already has withdrawn early orders for the DC-4.

Douglas also has been sounding out the airlines on the C-117, twin-engine military passenger version of the DC-3, but here again need could not be determined pending knowledge of how much surplus equipment would be available.

Not knowing how many might be required to produce for the airlines at its Oklahoma City plant, Douglas has been unable to give a firm price, though estimates run around \$115,000 to \$120,000.

**Vacant Planes**—The Oklahoma City plant, on which the overhead



#### THREE-CENT-A-MILE TRANSPORT:

Cutaway of Glenn L. Martin Co.'s new Model 207, 39-passenger, high-speed luxury liner with a claimed operating cost so low it makes possible a passenger fare of three cents a mile. Conveniences emphasized in the design, with luggage racks opposite the entrance door and above the seats cutting down seat depth. A "bus" version of the 207 eliminates forward and aft cargo compartments, and uses the palley space for baggage, making possible 42 seats.



### ORIGINAL CLIPPER SOLD:

Pan American's original Caribbean Clipper, a four-engine S-49 Silver Star flying boat, has been sold to Joseph Beck of Miami. The ship logged 12,328 hours, mostly between Nassau and Havana, and was used for training aerial navigators before it was retired a year ago. Whether it will be repaired or scrapped, Pan American says, has not been decided. Picture shows the S-49 during its career with PAA.

is about \$2,000,000 a year, also must be vacated by February, Douglas officials say. The Army C-117 contract will not back immediately after the January expiration date, unless the plan was to have Douglas complete an order of 131 of these planes, of which 73 would be sold to the military at the level of cost to the Army.

### Route Acquisition Legality Pondered

Arizona Airways, Inc., of Phoenix, is seeking Civil Aeronautics Board approval for acquisition of Transcontinental & Western Air's certificate for AM 16 between Phoenix, Ariz., and Las Vegas, Nev., via Prescott and Kingman, Ariz., and Boulder City, Nev.

Their application results from an agreement, July 11, between Arizona Airways, its affiliate Air-Safe Co., and TWA, providing for transfer to Arizona of TWA's certificate in return for 5,000 shares of \$10 par common stock and preferred stock with \$30,000 par value. Air-Safe—composed of H. G. Nelson (also president of Arizona Airways), Douglas Robinson, and James K. McElwain—has the European agency of Phoenix.

► **No Precedent**—Whether such acquisition is legal under section 406 of the Civil Aeronautics Act is the question the Board must determine. No precedents have set. The case is the third of its kind to come before CAB. The first, involving Arthur C. Hyde and Tri-State Aviation Corp., was dismissed for lack of prosecutability.

The second, Northern Airways' proposal to acquire the certificate of Harold Gillan, was the subject of recent hearing in a consolidated proceeding in Alaska.

TWA inaugurated service on AM 16 in November 1938. Because of lack of aircraft, service was suspended in May 1942, and the route is not now being operated.

### PCA Four-Engine Fund

Pennsylvania-Central Airlines will meet the cost of new four-engine planes for its present system with a \$10,000,000 issue of new securities. Fifteen-year convertible income debentures to the amount will be offered to the public through investment houses headed by White, Weld and Co. and Carl M. Loeb, Ellsworth and Co.

### AA Plane Bids

American Airlines' request for bids on a 30-passenger plane for which it proposed the general specifications. AVIATION NEWS, Aug. 13, brought response from five aircraft manufacturers. Bid were opened last week, but results were not announced immediately.

Company officials had under consideration a plan to prepare a brochure form the various bids received from the manufacturers. This plan was abandoned. To every employee on American's system for their reaction to which they consider the best craft.

### CAB Power Questioned In Page Probe Pic

Direct appeal to the Civil Aeronautics Board for dismissal, for want of jurisdiction, of its extensive investigation of Page Airways, Rochester, N. Y., is being made by the company.

Prior to adjournment of the hearing in Washington last week, Albert F. Betzel, counsel for Page, gave notice that this action would be taken following Examiner William F. Conklin's denial of a motion to dismiss the case.

► **Not Carrier**—Betzel maintained that Page is not an air carrier within the meaning of section 1 of the Civil Aeronautics Act.

At sessions in Rochester, Public Counsel called witnesses, including representatives of various Rochester war industries which had contracts with Page for air services and several passengers on former Page flights.

Other than making available, at Public Counsel's request, certain of its officials and employees, Page furnished no witness of its own.

► **Testimony Trend**—Testimony of some of the witnesses was similar to that at the opening of the hearing (AVIATION NEWS, Aug. 31) when Page was described as a charter operator not maintaining definite schedules.

In the event CAB's ruling on the dismissed motion is adverse to Page, bids will be due within 10 days from the date of decision.

### Non-Airworthy Planes 'Ground' Kentucky Line

The Kentucky Aeronautics Commission recently suspended, after hearings, a state certificate held by Bluegrass Airlines, previously charged with operating planes not airworthy.

Harry E. Bullock, commission secretary, said the certificate was suspended indefinitely or until the company can comply with rules and regulations of the commission and the Civil Aeronautics Administration as to airworthiness of its planes.

The company said it had ordered new equipment and had one new twin-engine plane ready for service with two more expected shortly. It had been operating two routes in Kentucky, daily except Sunday, hauling both passengers and freight. Bullock said neither would be flown again until three planes are available, two to fly and one to standby.



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(Report Agency—Aeronca, Inc., 14 Beaver St., New York 4, N. Y.)

AMERICA'S PERSONAL PLANE  
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# Freight Consolidation Plan Seen Boosting Air Cargo Use

New York organization, working with American Airlines on Model 39 experiment, finds load factor on mixed shipments high; clothing, department store merchandise, drugs in greatest volume.

By MARTIN V. MERRITT

A new venture in the handling of air freight that some airline cargo executives believe may have a profound influence on the growth of air cargo in the freight consolidator field has been developed by a New York organization in cooperation with American Airlines. This project is carried on as a part of the experimental work American is doing with Canadian-owned Vultee's Model 34.

In the use of a plane as large as this, with a payload of 18,500 pounds, there are as yet relatively few single customers who can furnish a one-jet shipment. American is now running a flight every Friday for one such customer. To accommodate the hundreds of potential air freight users whose total requirements at any one time are far below the 18,500

pound capacity figure, however, American has entered into an arrangement with Air Freight Consolidators, 600 Sackett Street, Brooklyn, under which the organization takes over the entire cargo facilities of the Model 34 every Tuesday, paying American a flat rate regardless of the amount of space used.

Sidney Glanzberg, president of the Brooklyn company, who has been engaged for some time in the rail and motor freight business, is enthusiastic about the possibilities of the consolidation idea. This practice has been followed for years in rail and motor freight and its application to air is merely an adaptation. Mr. Glanzberg says that with the exception of the month of American's experimental period on the Model 34, a careful

## Air Express Optimism

Air express executives are predicting a banner year in 1945, in volume and revenue, on the basis of record-breaking gains in the first six months of 1945.

Air Express Division of Railway Express Agency notes increases in domestic air express shipments from \$54,375 for the first half of 1944 to \$100,338 for the corresponding period this year, a gain of 88.6 percent. Gross revenues, meanwhile, went up 58.6 percent. Internationally the gain in shipments was 23.4 percent, from 111,463 to 133,056.



AIR FREIGHT EXPERIMENT:

Indication of the cost ranges which may be expected of non-scheduled air cargo operations should be passed at an early date by National Skyswey Freight Corp., which operates cross-country service from Long Beach ( Calif.) Municipal Airport. One of the company's fleet of Conestoga or similar California aircraft after arriving from New York with a load of Amherst furniture. Shown in the cargo hold of one of their jets are three of the company's so-flying Tiger airmen: Robert W. Driscoll, president, center; Robert P. Hidman, vice-president in charge of operations, left; and Jack Cornfield, vice-president in charge of maintenance.

study of the consolidation plan will be made to determine what revisions, if any, are needed before the work is projected to other air carriers.

Air Freight Consolidators has not established a rate scale similar to that which is known as less-than-carload in rail freight, but has acted as shippers' agents, charging a cost-plus fee for each shipment. While this has afforded greater protection during the experimental period for the consolidators, it is considered quite probable that a pound-per-mile rate will be developed should the split-load idea be expanded.

Load factor experience has been very encouraging, according to Mr. Glanzberg. With a cargo capacity of 15,000 pounds available, his organization has been able to secure loads averaging 17,500 pounds.

The type of cargo has varied but has been predominantly ready-to-wear clothing, department store merchandise, and drugs and chemicals.



## PICAO Unit Heads Named By Warner

Temporary chairmanship appointments prepare navigation and transport committees for meeting next month.

Temporary chairman of the incorporated Air Navigation and Air Transport committee of the Pan-American International Civil Aviation Organization's Interim Council last week was appointed by Dr. Edward Warner, president.

Named were A. H. McCosh, Australian delegate, for the navigation post and Dr. F. H. Copes van Hasselt, delegate of The Netherlands, for the transport assignment.

The selections were announced shortly after adjournment of the council's first session. Full membership of the two committees will not be known for some time, as every state signatory to the Interim Agreement has the right to appoint a representative.

**Other Duties.**—The two delegates will hold office for 30 days following first meetings of the committees, Oct. 2 and 3. Their appointments will be ratified or changed when the council reassembles Oct. 15. Normally, the council itself would elect both of the committees, but authority to make the temporary appointments was given the president to eliminate need for a special meeting before the committees were convened.

McCosh's Air Navigation Committee and sub-committees will study and advise international standards for communications procedures, air navigation aids, search and rescue practices, rules of the air, licensing of aircraft, aeronautical meteorological publications, aeronautical maps and charts, and accident investigation.

The Air Transport Committee and its subsidiary groups will deal with operational, economic, statistical and legal aspects of international air transportation.

► McCosh, a veteran of the Australian Flying Corps in World War I, has played a leading role in development of civil aviation in Australia in recent years. In 1931, he made the overland survey in Australia for the Ross Smith pioneer flight from England. In 1937-38, he was in England with the British Air Ministry, organizing the Singapore-Sydney end of the Anglo-Australian air mail route. He is at present chief inspector of

## Pogue Predictions

L. Welsh Pogue, Civil Aeronautics Board chairman, foresees:

► Cargo revenue "since departing" that from passenger.

► Expansion of commercial airfares maintaining their good competitive position with foreign air carriers in international air services.

► Volume of domestic airfares expanding through increasing traffic load. ► "A very liberal testing" of traffic potentialities is another consideration.

Pogue declared, in a recent radio address, that the future trend of airfares is full development of the market. He also said that total realization that "civil aviation will be as important to peace as military aviation has just proved itself to be in war." His advocated support of technical advances and government programs designed to assist aviation's growth.

gross organization for the Civil Air Board.

► Dr. Copes van Hasselt is director of civil aviation for the Royal Netherlands Government. He practiced law in Java until 1931, when he joined the Netherlands East Indies Air Force. He escaped the Japanese and was sent to the U. S. as personnel officer of the Dutch flying school at Jackson, Miss. He attended the Chicago International Civil Aviation Conference as advisor on civil aviation to the Netherlands Government in London.

## Pickup Air Service To Expand Abroad

Plans for the expansion of All American Aviation, the country's only "push-pull" airline, extend to the foreign as well as the domestic field, according to the annual report to stockholders by Harry R. Buckley, president.

Arrangements have been completed or are being negotiated for establishment of air pickup in several foreign countries, and the expectation is that the service will start in the next six months in Canada, Brazil and Colombia. It is in Brazil that the company has completed organization of a subsidiary development and service company, Equipments All American Avia-

tion, S. A. (Aviation News, July 8).

► **National Plan.**—Domestically, the service plans straight air pickup routes and combined passenger and cargo routes. Applications have been filed for 444 route miles to serve 1,158 communities on 66 routes.

Operations of all the service, Buckley estimates, would require 138 aircraft of both single and twin-engine types. As of July, All American was operating a fleet of nine Stinson Reliants. It had been allocated two Douglas DC-3's, but these, says Civil Aeronautics Board sources, were repudiated.

Although the firm's total business for the fiscal year ended July 31 was \$3,800,000, compared with \$3,475,000 in the year preceding, profits were down to \$18,771 from \$38,877. Buckley and the decline was due to an operating loss of \$73,891 in the air transport division, and \$62,967 deferred charges write-off in connection with route surveys and new route applications.

► **Post Office Operation.**—The company serves 317 communities in six states. Authorization by the Post Office Department of additional flights increased daily scheduled mileage 1,342 miles to a total of 3,231. Mail traffic was up 42.4 percent, express 33.7 percent. Main effort of the company's manufacturing division went to production of equipments and experimental projects for the military.

## TWA Officials Touring N. Atlantic Route Points

A group of Transoceanic & Western Air officials left New York last week for the British Isles and Continental Europe to study prospects for North Atlantic routes recently certified to the company by the Civil Aeronautics Board.

The delegation was headed by T. B. Wilson, chairman of TWA's board, who has charge of TWA foreign operations. With him were George Spater, David E. Midgley, Harold F. Blackburn, Daniel Blanchard and C. T. Thomas.

► **Travel Task.**—They were traveling to Erie by American Export Airlines, and the remainder of the way "by whatever type of conveyance is available."

Jack Nichols, TWA vice-president, went to Cairo for the same purpose some time ago.

# Carriers Begin Readjustment To Non-Priority Travel Status

Belief that wartime control of service patterns may follow priority air travel out of existence on Oct. 15 also expressed; problems of shifting ticket and space procedures emerge immediately.

The airlines' long tussle with domestic air priorities will end Oct. 15 with an interim 20-day period during which, though airlines and military sources believe volume of this type of travel may dwindle at its own accord to virtually nothing.

There also is reason to suspect that controls over the wartime air service pattern, whereby the Civil Aeronautics Board and the Army had final say on changes proposed by the carriers, will cease to exist when, or shortly after, priorities controls are removed.

► **First Step.**—A sharp curtailment in priorities became effective Sept. 15, with the telescoping of the present four classes into one, shielding all six so-called leave-type and automatic priorities usually included in "travel by air" military orders, fewer military requirements for expedited official travel, and stringent screening of both military and civilian requests. We Departmental directives are that they will cut the volume of priorities from 150,000 to 15,000 or less.

About 50 percent of the priority travel has been by troops mostly cabined men, on leave after return or before departure to foreign theaters. For the most part the

## Panama Visa

Los Angeles officials of Pan American World Airways anticipate a substantial increase in travel between the United States and Latin American countries through Panama, as the result of the easing of a previously cumbersome restriction.

Passengers seeking a Panama visa formerly had to apply to the Panamanian custom who, in turn, had to obtain specific permission from the Panamanian government. Under new regulations the custom may issue the visa to any citizen of the Western Hemisphere and Great Britain without the delay and cost of enabling Panama for authorization.

remainder has been directed orders and cases that before VJ day were considered urgent. Passages granted after Sept. 15, say Air Transport Command officials, will be counted generally to air travel directly concerned with supervising and implementation of demobilization and occupation—in effect, completion of the war effort.

Concurrent with discontinuation of domestic priorities controls, those on civilian air service services to South and Central America and Alaska will also be dropped. The War Department explained that military services paralleling these commercial routes will accommodate urgent military traffic. Priority controls on civil trans-Atlantic and trans-Pacific airline services will continue "for the present."

► **Line Steamer.**—The new directive provides of a breaking point from Sept. 15 to Oct. 15 is in line with the airlines' desire for a gradual curtailment to prevent adjustment to the changeover to non-priority operation. There was concern over the fact if priorities were cut off too sharply the re-establishment might be necessary. Actually, the carriers have 40 days notice that priorities will be discontinued, since the War Department announcement was made Sept. 5. Moreover, the move has been expected.

One airline spokesman said the change back to a non-priority basis might prove as complicated as priorities did originally. Airlines reservation and ticketing personnel are accustomed to the priority system—many have not worked under any other—and changes in methods of bookkeeping and readjustment of the delicate balance of space control will present problems.

At least one transcontinental operator is considering booking nonpriority passengers up to 75 percent of space for the 30-day period after Sept. 15, but admits frankly that it does not know what changes in procedure will be necessary after Oct. 15.

► **Cabin Inspection.**—Warline ser-

vices pattern controls were initiated early in 1943 under the same executive order that permitted the inauguration of federal priorities, and were administered primarily in consideration of wartime priority traffic. Gradually, proposed changes in the service pattern were subject to approval by the military director of civil aviation, and later by the Air Transport Command. In March, 1944, Army relinquished to the board the duty of passing on such changes—a nominal delegation since CAB recommendations in that regard generally had been accepted by the military ATC officials say my remaining vestige of military control over the air service pattern will go out with priorities. Board sources say CAB probably will request official termination of wartime service pattern controls through a letter to the War Department after priorities cease.

Any immediate difference in the service pattern is unlikely, however, after the board no longer passes on schedules and equipment because of the increased necessity to make changes. This may be easier for operation of some routes hitherto not served because of the war situation, but the world would require bold action, since such suspensions are authorized by special exemption order. More requests may be expected for non-stop privileges, always subject to board approval, and it is certain that more cities of origin, heretofore passed over by the big airways, will be served soon.

**New Airmail Rate Accepted By Three**

Three of the "Big Four" air carriers—American, Airlines, Eastern Air Lines, and United Air Lines—have formally expressed their willingness to accept Civil Aeronautics Board's proposed new mail rate of 40 cents per ton-mile (AVIATION NEWS, Aug. 20).

The fourth—Transoceanic & Western Air—has decided to do the same but will ask the board to make the rate effective, as far as TWA is concerned, on Oct. 1.

► **Retrospective.**—As proposed by CAB, the rate would be retroactive to Jan. 1, the date on which the board served its original orders to show cause why mail pay should not be reduced from the present 46 cents per ton-mile to 30 cents.

The position of American, East-

ern, and United was made known at brief hearings before Examiner Charles J. Frederick. The three lines went as record as having no objection to the 40-cent rate. They made clear, however, that their failure to object now was not to be construed as binding in future rate proceedings.

## Mark Anniversary Of Air Mail Flight

Postrunner General Robert E. Hannigan was guest of honor at a luncheon in New York Friday, commemorating the twenty-fifth anniversary of the first flight of trans-continental air mail, sponsored by the Wings Club and the Aviation Section, New York Board of Trade.

James P. Murray, now resident vice-president of Boeing Co., Mr. Washington, D. C., who flew the Chicago-to-Salt Lake City leg on the first flight, was present.

Summer Sewell, former Governor of Maine, now president of American Export Airlines, introduced Mr. Hannigan. Following his address, presentation of a commemorative plaque to City of New York was made by Cyril Thompson, vice-president, United Air Lines, to the Mayor marking the occasion.

Representatives of military, naval, industrial and civic life present included Major General Ernest E. Anderson, AAF, representing General H. H. Arnold; Rear Admiral Charles E. Rosenblatt, U.S.N., J. A. Zeller, chairman Industry Group, War Labor Board, NY Region, vice-president, Remington-Rand, John B. Glenn,

## Baby Flights

Transoceanic & Western Air soon may tax a heretofore solely casually exploited source of passenger revenues by featuring one or more daily transoceanic trips at "Baby Flights."

TWA officials believe that as transoceanic flights are lifted as increasingly large number of mothers with infants will turn to air travel to resume the convenience of lengthy airway transport journeys.

If infant flights develop as expected, TWA's office flights specifically equipped for infant care and feeding. Seats assigned for such flights would be selected and trained for the type of service.

President, New York Board of Trade; Bob John McNamee, communications, Dept. of Macias and Aviation; Ned Chambers, president, Wings Club; Col. Allen M. Pope, president, Commerce and Industry Association, Inc.; Lenny A. Lincoln, president, Metropolitan Life Insurance Co. and president of the Chamber of Commerce of the State of New York.

## Brazil, Peru Schedule Air Talks With Burden

William A. M. Burden, Assistant Secretary of Commerce, has gone to Brazil and Peru to discuss civil aviation topics with officials of those republics.

► Burden's agenda are post-war development of civil aviation, integration of the airway system in the western hemisphere, aviation training and education, and air safety.

► **Bolivia-Hope.**—Representatives of all South American nations, with the exception of Argentina, expressed the hope that last year's Inter-American Civil Aviation Conference at Chicago, that a single airway system might be adopted for the western hemisphere. Argentina was not represented at the meeting. Canada and the Republic of Mexico already use airway facilities and methods of the Civil Aeronautics Administration.

One of the high points of Burden's trip may be a visit with Adolph Berle, Jr., U. S. ambassador to Brazil, who, while Assistant Secretary of State presided over the Chicago conference.

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713. BRITISH SARAWAK  
714. BRITISH NORTH B



## Where Is Everybody?

A CAB EXAMINERS' REPORT making recommendations to the Board of vital importance to all present and proposed operators of non-scheduled air services was issued Aug. 29, and appeared in AVIATION NEWS Aug. 27. Comments on the report, suggesting registration and certification of all operators, were requested by CAB within 30 days from issuance. The Board made the declaration that, depending upon the nature of such comments, it may assign the subject for oral argument. Believe it or not, despite the long-range significance of the proposals made by the examiners, which may be adopted unchanged by the Board, there had been only one comment filed with the Board up to last Thursday.

It has been the habit of some fixed-base operators to sit back with an air of hopelessness and label the members of the Civil Aeronautics Board as a group persecuted against them. The Board, however, is compelled to base its decisions in large part from the best evidence which it is able to gather. If the non-obedient operators now avail themselves of their opportunity to win an oral argument on this report and present their case to the Board, in a show of strength of unity, let there be no wells of anguish, and no cries of persecution or accusations of sinister influences from the bog, bad airlines.

Response from the operators has also been meager, if there has been any at all, on the proposed safety regulations suggested by CALB's Safety Bureau several weeks ago. These appeared in the News, Aug. 27. If adopted, these recommendations would make it impossible for far more than half of today's operators to engage in any transport business.

Apparently the only group which has shown an awareness of the problem is the Aeronautical Training Society, whose newsletter last week told the operators bluntly.

"What will eliminate objectionable features from proposed regulation is a strong response from the grass roots. Representatives of one or two trade associations in Washington can't do the job alone. What the Board will respect, will listen to, what it may even hope for is hundreds of responses, both personal and by mail, from those . . . with a stake in the business. And that means every fixed beer and every distributor

We hope SPB will have few customers from local governments for aircraft memorials.

Robert H. Woods

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**MILITARY-SAT PRODUCTION OF AMMUNITION LINES** as printed by James Sennett of the SPRING DIVISION in Bethesda, Illinois. This Bore-Werner plant manufactures the making of Garand Rifle Cyls and supplied several anti-aircraft projectiles for the manufacture of loads for the 80 Caliber Gun that plays a major role in America's air supremacy. In paper it is a detailed history of mechanized processes sprung for maximum value and usefulness.

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